

FirstGlimpseMag.com

FirstGlimpse®

HOME THEATER: pages 8 to 22

Insignia's Advanced Series
LCD HDTVs p. 8

COMPUTERS: pages 49 to 63

Epson Stylus NX515
All-In-One Printer p. 49

PORTABLE DEVICES: pages 64 to 74

CradlePoint CTR350 3G Mobile
Broadband Travel Router p. 64

DIGITAL IMAGING: pages 23 to 38

Insignia NS-DSC10B
10-Megapixel Camera p. 23



Since 1979, Sandhills Publishing has produced publications covering technology beginning with the introduction of *Processor*. Over the years, the company has developed a complete line of computing publications, encompassing *Smart Computing*, *PC Today*, *Computer Power User*, and *First Glimpse*.

Our plain-english approach has served audiences well for 30 years, ensuring they receive accurate and unbiased technology information to meet their needs.



FirstGlimpse®

Table Of Contents • Volume 6 Issue 8



On Our Cover: Featured on this month's cover is Insignia's 42-inch NS-L42X-10 LCD HDTV (\$799; www.insigniaproducts.com), Epson's Stylus NX515 All-In-One Printer (\$149.99; www.epson.com), CradlePoint's CTR350 3G Mobile Broadband Travel Router (\$99.99; www.cradlepoint.com), and Insignia's NS-DSC10B 10-megapixel camera (\$89.99; www.insigniaproducts.com).

Open

6 CE News

Home Theater

- 8 Insignia's New Advanced Series LCD HDTVs
Now Presenting: High-Quality Picture & Sound
- 10 Are You Seeing The Real Movie?
The Truth About HD Films & Refresh Rates
- 11 BD vs. Upconverting DVD Players
All You'll Need Or Just Enough
- 12 It's All In The Video Details
Which HDTV Specs Really Matter?
- 13 Light Considerations
Nothing To Blink At
- 14 Make The Move To BD
Enhance Your Home-Theater Experience
- 15 Mount Your Flat-Panel HDTV
Hang 'Em (Not So) High
- 16 HDTVs
Screen Technology Differences
- 17 Essential Things To Know
HDTV Video Resolutions

18 to 19

HDTV Comparison
Charts
LCD; Plasma

20 to 21

Home Theater Product
Profile Section

22 Noteworthy Home Theater
Accessories & Services

Digital Imaging

- 23 Insignia's NS-DSC10 Digital Camera
Get More Bang For Your Buck
- 24 Automatically Improve Your Photography
Enhance The Details
- 25 Storage For Your Photos & Videos
Keep Your Digital Collections Safe
- 26 Upgrade To A New View
The Benefits Of HD Camcorders
- 27 Share Your HD Video
Transfer, Edit & Burn
- 28 Get To Know CMOS
The Eye Of The Digital Camera
- 29 Give The Gift Of Effortless Memory Sharing
Eye-Fi Share Video Card

30 Optical vs. Digital Zoom
See The Difference

31 Essential Things To Know
Camera Batteries

32 to 34 Digital Imaging
Comparison Charts
Point-&-Shoot Cameras;
D-SLRs; Digital
Camcorders

35 to 37 Digital Imaging Product
Profile Section

38 Noteworthy Digital Imaging
Accessories & Services

Lifestyle Close-up: Going Wireless

- 39 Going Wireless
Unwire, Unwind & Uncomplicate
- 41 Wireless Gaming Here,
There & Everywhere
Connected Game Consoles & Portable Gaming Systems
- 42 Notebooks On The Loose
Wonderfully Wireless
- 43 Transmit Audio Wirelessly
Free Your Audio System & Speakers From Cable

- 44 Wireless Routers 101**
What You Need To Know Before You Make A Purchase
- 45 Unleash Your Digital Memories**
Use Your Wireless Network To Share Photos
- 46 Put Your PC (& The Internet) On The Big Screen**
Stream Multimedia To Your HDTV
- 48 On-The-Go Wireless**
Cut Loose & Cut The Cords

Computers

- 49 Epson Stylus NX515 All-In-One Printer**
Smart, Simple & Affordable All-In-One
- 50 The Best PC Investment**
The Benefits Of Using A Surge Protector
- 51 Outfit Your PC Right**
Geek Squad's New Computer Setup Services
- 52 A PC That Won't Crawl**
When You Have A Need For Speed
- 53 Gaming With The Right Gear**
PC Game Controllers, Keyboards & Mice
- 54 Wading Through PC Specs**
Making Sense Of It All
- 55 PC Extras That Will Save You A Buck Or Two**
Investments That Will Pay Themselves Off
- 56 Graphically Speaking**
What To Look For When Purchasing A Video Card
- 57 Essential Things To Know**
Netbooks
- 58 to 59 Computers Comparison Charts**
Netbooks; Notebooks
- 60 Software Listings**
Get More Out Of Your PC
- 62 Computers Product Profile Section**
- 63 Noteworthy Computers**
Accessories & Services

Portable Devices

- 64 Wi-Fi Where You Need It**
CradlePoint's CTR350 Keeps You Connected
- 65 The Same But Different**
The Connection Between iPods & MP3 Players
- 66 Digital Radio On The Go**
Check Out A New Sound
- 67 Let Your Phone Be The Navigator**
Take Advantage Of GPS Capabilities
- 68 Back Up Your Mobile Phone**
Never Lose Your Contacts, Ringtones & Photos
- 69 CE Retailers' Mobile Services**
One-Stop Convenience
- 70 Essential Things To Know**
International Cell Phone Use
- 71 to 72 Portable Devices Comparison Charts**
MP3 Players; GPS Devices
- 73 Portable Devices Product Profile Section**
- 74 Noteworthy Portable Devices**
Accessories & Services

Gaming, Media & More

- 75 Where The Past Meets The Present**
Devices For Analog & Digital Use
- 76 Parental Control**
Restrictions For Your Kids' Gaming
- 77 ESRB Game Ratings & Descriptions**
Find Material That's Appropriate For Your Kids
- 78 Gaming System Comparison Chart**
- 80 Noteworthy Gaming, Media & More**
Accessories & Services
- A Glimpse Around The Corner**
- 81 A Peek At The Digital Future**
Bluetooth Car Kits

Exit

- 83 Celebrate Your Independence**



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Please note: Prices listed in this issue are for general reference and may vary from retailer pricing.

The Latest Arrivals

Look For These New Products

Keep an eye out for these products hitting Best Buy shelves for the first time. Some of the items listed below are showcased in this month's one-page product profiles, so be sure to take a look at the listed page numbers for more information.

Home Theater

Insignia Advanced Series LCD HDTVs

■ See page 8

IOGEAR Wireless USB Audio/Video Kit

Digital Imaging

Insignia NS-DSC10 Camera

■ See page 23

Computers

Asus CM5570-AP002 Desktop

Compaq Burst 110c-1040dx Netbook

Dell Burst im10-010B Netbook

Dell i545s-004B Desktop

Dell im10-008B Netbook

E Machines ET1810-01 Desktop

Epson Stylus NX515 All-In-One Printer

■ See page 49

Gateway LT3103u Netbook

Gateway SX2800-01 Desktop

GeForce 9800 GT 1GB

EcoIntelligence Graphics Card

HP P6110y Desktop

HP 110-1025dx Netbook

HP 110-1045dx Netbook

Toshiba mini Notebook 205-n311/w

Portable Devices

CradlePoint CTR350 3G Mobile Broadband Travel Router

■ See page 64

Game Titles

• July 7 •

The Bigs 2

• July 14 •

NCAA Football 10

• July 21 •

G-Force

• July 26 •

Wii Sports Resort

• August 14 •

Madden NFL 10

Movie & TV Releases

• June 30 to July 6 •

"12 Rounds" DVD & BD

"Entourage: The Complete Fifth Season" DVD

"Jonas Brothers: The 3D Concert Experience" DVD & BD

"Parker Lewis Can't Lose: Season One" DVD

"Princess Protection Program" DVD

"Stargate Atlantis: The Complete Fifth Season" DVD

• July 7 to 13 •

"Matlock: Third Season" DVD

"Kath & Kim: Season 1" DVD

"Murder She Wrote: Complete Tenth Season" DVD

"Mystery Science Theater 3000: XV" DVD

"Push" DVD & BD

"Reno 911: Complete Sixth Season" DVD

"The Unborn" DVD & BD

• July 14 to 20 •

"Bewitched: Complete Eighth Season" DVD

"ER: The Complete Eleventh Season" DVD

"Grey Gardens" DVD

"The Perfect Score" DVD

"The State: Complete Series" DVD

"The Wiggles: Go Bananas!" DVD

"This Is Spinal Tap" BD

Music Releases

• June 30 to July 6 •

"A Night On The Town" Rod Stewart

"American Saturday Night" Brad Paisley

"Electric Dirt" Levon Helm

"If Tomorrow Comes..." Maino

"In Ancient of Days" Thy Will Be Done

"Jeremiah" Jeremiah

"Reveal Your Glory" Vicki Yohe

"The Dream" In This Moment

• July 7 to 13 •

"BLACKsummers' night..." Maxwell

"A Higher Place" Born Of Osiris

"Greatest Hits" The Donnas

"Hannah Montana 3" Original Soundtrack

"Nervous Nitelife: Summer Club" DJ Theo

"Nothing Personal" All Time Low

"Ruination" Job For A Cowboy

• July 14 to 20 •

"Celtic Thunder: Take Me Home" Celtic Thunder

"Constellations" August Burns Red

"Harry Potter and the Half-Blood Prince" Original Soundtrack

"Ill Communication" Beastie Boys

"Leave This Town" Daughtry

"Live At Inglewood 1968" Deep Purple

"Steel Wheels" The Rolling Stones

"Supernatural: Legacy Edition" Santana



ce news

COMPILED BY ANDREW LEIBMAN

▶ Napster Has A Great Deal For Music Lovers

Napster, arguably those behind the digital music explosion, launched a new deal that lets music lovers get unlimited access to Napster's 7 million-song-strong music service for as little as \$5 per month. Five unrestricted MP3 downloads each month to keep forever are also included with the subscription. Napster's MP3 catalog is unshackled by DRM and covers all music genres and a multitude of music by independent artists. If five isn't enough, you can buy additional songs for 69 cents to \$1.29. You also get access to more than 60 commercial-free radio stations and more than 1,400 preprogrammed playlists. Napster users can also play MP3s on any popular MP3 player, including iPods, iPhones, and music-enabled MP3 mobile phones.



▶ BlackBerry Earns Perfect Score In Security

Lopez Research recently reported on the security performance of the top smartphones in device, network, and transmission categories. RIM (Research In Motion) came out on top with its BlackBerry platform, which earned a flawless 4 out of 4 score in all categories. According to a researcher, BlackBerrys carefully manage the device, software, and application control policies to deliver robust security protection from top to bottom.

▶ DVD & Blu-ray Disc Movies Still Favored

NPD's most recent "Entertainment Trends In America" report asked consumers about their media consumption tendencies from January through March and found that DVD and Blu-ray Disc sales and rentals account for 88% of consumer spending in the home video category. The report also reveals that the typical U.S. home video consumer spends \$25 per month on average on home video purchases and rentals, which breaks down to 63% on DVDs, 7% on Blu-ray Discs, 18% on DVD and/or BD rentals, 9% on video on-demand services, and 3% on digital downloads and on-line streaming.

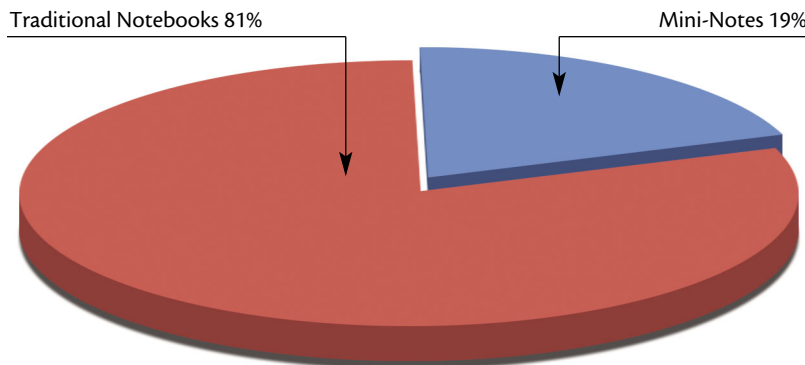


m a r k e t p l a c e

Netbooks Dig Into Notebook Market

DisplaySearch recently announced its notebook shipments for the first quarter of 2009, and it looks like netbooks, or mini-notebooks, are treading on traditional notebook turf. The firm revealed that 5.9 million netbooks shipped in Q1 2009 and 24.4 million traditional notebooks shipped in the same period. Based on these figures, netbooks currently account for 19% of the mobile PC market. The trend also traces back to last year; in Q4 of 2008, netbooks accounted for 20% of the mobile PCs shipped, or 8 million netbooks compared to 32.2 million traditional notebooks. That's pretty impressive for a device category that practically didn't exist this time last year.

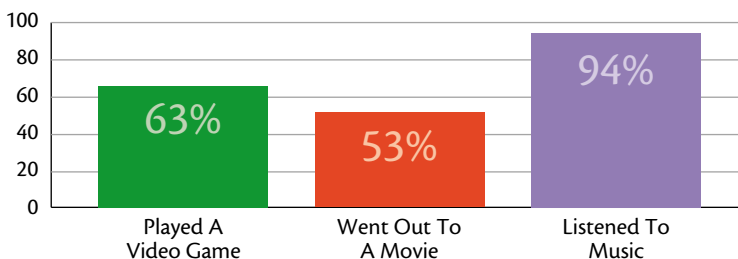
Netbook Penetration in the Notebook Market: Q1 '09



Games Trump Movies, But Music Wins The Pot

According to NPD's March 2009 "Entertainment Trends In America" study, 63% of Americans have played a video game in the past six months, while just 53% claim to have gone to the movies during that same time period. There's a lot of gaming going on, for sure, but music listening has all other forms of entertainment beat hands down. About 94% of survey respondents reported listening to music. The report also found that video games account for one-third of Americans' average monthly core entertainment spending.

The Last Six Months U.S. Consumers . . .



FirstGlimpse

tidbits

Netbooks are popular, but who's buying them? A new study reveals that traditionally tech-centric coastal cities



are the biggest netbook markets. The national average netbook share of total notebooks sold from October 2008 to April 2009 is 9.8%. In New York, that number is 12.3%, followed by San Francisco/San Jose, Miami, San Diego, Washington, D.C., Los Angeles, and Boston at 11.4%, 11.3%, 10.9%, 10.9%, 10.8%, and 10.8%, respectively.

Source: NPD Group

According to doctors, bending your elbow to talk on your cell



phone stretches the ulnar nerve responsible for finger movement and can lead to "cell phone elbow." The unnatural position apparently reduces blood flow, potentially causing long-term damage. To prevent cubital tunnel syndrome, the ailment's formal name, doctors recommend talking less. Or you could banish discomfort entirely with a Bluetooth hands-free kit.

Source: CNN

The flat-panel TV share of worldwide TV shipments grew from 66% in Q4 2008 to 68% in Q1 2009. As LCD TV prices dropped even further in Q1 2009 than they did over the Q4 2008 holiday season, LCDs' worldwide share went from 58% over the holiday to 62% for the first quarter of this year.



Source: DisplaySearch

The Associated Press' AP Mobile multimedia news portal for portable devices just celebrated its one-year anniversary. Since its launch on the iPhone in May of last year, mobile news junkies have read more than 55 million local stories on AP Mobile.

Source: The Associated Press

Insignia's New Advanced Series LCD HDTVs

Insignia NS-L42X-10 LCD
42-inch HDTV
\$799
www.insigniaproducts.com

Now Presenting: High-Quality Picture & Sound



Has an HDTV manufacturer ever asked you what you'd most like to see in an HDTV? Best Buy has taken the time to find out—via in-store feedback from consumers, suggestions on Insignia's Web site (www.insigniaproducts.com), and its own product testing and research—the features that you'd want in an HDTV. Best Buy's exclusive new Insignia Advanced Series LCD HDTV line was developed to deliver four things that shoppers, Blue Shirts, and engineers wanted to see: the best HD picture and integrated speaker quality, a sleek and elegant design, and superb customer service. Here, we'll take a

look at the 42-inch Insignia NS-L42X-10 LCD HDTV (\$799; www.insigniaproducts.com) to illustrate the advantages of the Insignia's Advanced Series.

The Proof Is In The Picture

Nearly all customers said that picture quality was the most important feature when shopping for an HDTV. The NS-L42X-10 features the highest video resolution (1080p) produced by today's HD content. Additionally, its 120Hz refresh rate means that baseball games, fireworks, and other fast-motion video will appear crisp and clear, rather than blurring or lurching across the screen. The HDTV's 6.5ms response time also

helps to produce excellent picture quality with sports and action-filled cinematic content. The HDTV delivers color that looks vivid and true to life, thanks to the Insignia NS-L42X-10's 4000:1 contrast ratio.

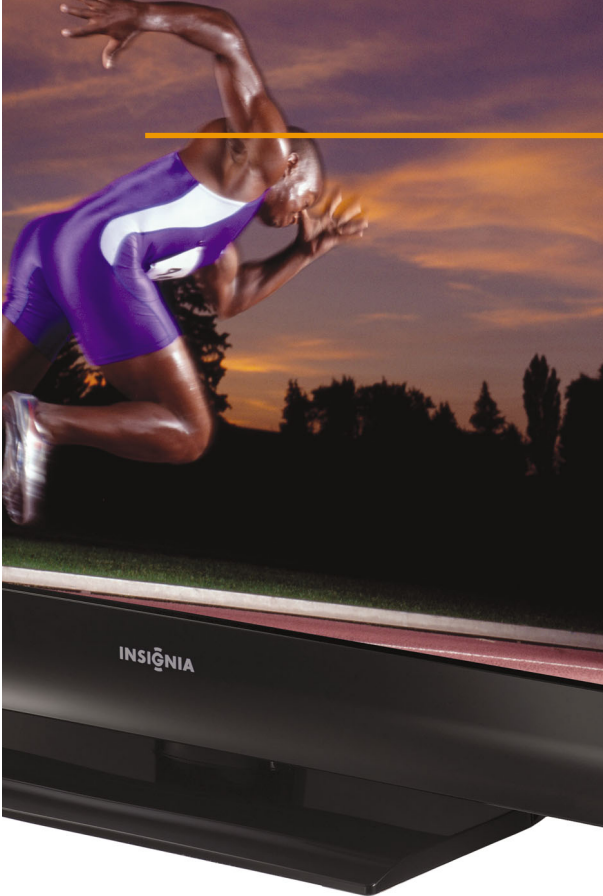
To help you get the most out of your HD sources, the NS-L42X-10 includes three HDMI inputs, which provide the all-digital, uncompressed signals that provide the best picture quality.

And when it comes to the HDTV's compatibility with older sources, such as an original Xbox or a tape-based camcorder, the NS-L42X-10 includes a Composite, S-Video, and Component input. There's also a VGA input, which makes it easy to connect a laptop to display photos or movies stored on your hard drive.

In short, the NS-L42X-10 offers the premium video performance you want in your home-theater centerpiece, but it won't cost you more than \$1,000 to acquire a top-notch display.

You've Sounded Off

Over 80% of Best Buy customers said that the sound quality of the internal speakers was a key factor when shopping for a new flat-panel TV. Typically,



the limited space inside a flat-panel TV causes integrated speakers to sound tinny or produce muffled audio. Insignia's Advanced Series line, including the NS-L42X-10, features Audyssey Audio's EQ technology, which compensates for acoustic distortions to produce crisp and clear dialogue and music. The result is an immersive sound that won't require you to immediately invest in an expensive home-theater surround-sound system.

The NS-L42X-10 also features Audyssey's Dynamic Volume to keep audio levels consistent. You'll no longer need to crank up your HDTV's volume to hear whispering characters or jump out of your seat when a loud commercial break catches you off guard. By eliminating dramatic volume swings, it will be easier to hear sound effects, character dialogue, and other often unnoticeable sounds. On the flip side, booming battle scenes won't require you to quickly search for the remote to bring the volume down a few notches.

Style & Service

At only 5.5 inches thin and with a built-in VESA mounting hole pattern on the back, the NS-L42X-10 can be elegantly

displayed on the wall. For those who prefer to place the HDTV on an entertainment center, the NS-L42X-10 also offers a sturdy stand. And with its understated and sleek black design, the NS-L42X-10 will match any home décor.

All Insignia Advanced Series LCD HDTVs include a standard two-year warranty,

which covers parts and labor. For models that are 37 inches and larger, there's no need to risk further damage to your TV by boxing and shipping it when it needs repair. Instead, call 1-888-BEST BUY, and Best Buy will send a repair specialist to your home to investigate why your Insignia HDTV isn't working properly. And, if the repair specialist determines that your HDTV can't be repaired on the spot, they will provide a free loaner Insignia HDTV until yours is fixed. If your HDTV can't be fixed or the necessary parts aren't available within 14 days, the two-year Insignia Advanced Series LCD HDTV warranty will replace your Insignia HDTV with a comparable model.

Meet Insignia

Insignia's Advanced Series NS-L42X-10 LCD HDTV is just one example of the type of quality you can expect. Best Buy offers other exclusive brand products in their Insignia line, including BD players, cameras, HD portable radios, and many home-theater accessories. To further enhance your Insignia Advanced Series HDTV home-theater experience, you won't have to look far in order to find the Insignia hardware you need. **PC**

INSIGNIA™

More Than A Transaction

Once you've taken home your shiny new Insignia purchase, the Insignia experience doesn't stop there. By joining the Insignia Community (www.insigniaproducts.com), you can view frequently asked questions and answers to educate yourself about the latest Insignia products and technology. Insignia product engineers also participate in forum discussions, where you are encouraged to share your opinions and thoughts for future Insignia developments. ●

FirstGlimpse

Are You Seeing The Real Movie?

The Truth About HD Films & Refresh Rates

Displaying film-based material in the video-based medium of TV has always required some technological trickery. That's because of the relationship between two specifications we don't usually have to think much about: frame rate and refresh rate.

Frame rate is the speed at which visual material is shot. Video uses 30fps or 60fps, and film has a standardized rate of 24fps.

Refresh rate is the number of times per second a TV updates a frame of video on-screen. In North America, 60Hz, or 60 times per second, is the traditional norm. This accommodates video perfectly. During playback of 30fps video, each frame is displayed twice. For 60fps material, each frame is displayed once. With film-based material, things get trickier. Here's why.

The problem with transferring film-based content to video is the fact that 24 (film's frame rate) doesn't divide evenly into 60 (the standard TV refresh rate). The long-standing method of making film fit numerically is a process called 3:2 pulldown. In a nutshell, one frame is displayed three times and the next frame displayed twice, in an alternating sequence. This way, four film frames can be mapped across 10 video frames.

Unfortunately, using 3:2 pulldown can create glitches in the picture. These usually appear as motion artifacts, such



as blurring, choppiness, and a jittery appearance called judder.

It's increasingly possible, however, to view film-based movies and programs at their original 24fps rate, without the potential distortions of 3:2 pulldown. Most Blu-ray Discs are natively encoded at 24fps, and a number of BD players can output content at 24fps.

But to view this frame rate, your HDTV must also be capable of accepting the 24fps signal. In addition to its usual 60Hz performance, it must be able to switch to a refresh rate that is a multiple of 24.

You'll be ready with an HDTV that can employ a refresh rate of 48Hz, 72Hz, 96Hz, 120Hz, or even 240Hz or 480Hz.

What won't work? A TV that only operates at 60Hz will resort to 3:2 pulldown when sent a 24fps signal, thus negating the benefits of using that frame rate.

The Refreshing Difference

Why is 24fps aesthetically satisfying? There's not really an objective reason. It's simply because that's what our eyes are accustomed to seeing cinematically.

Depending on when you last bought a television, you may not have paid attention to its refresh rate. The next time, however, refresh rate is definitely a spec worth factoring into your decision. **FC**

BY BRIAN HODGE

Pick The Right Hardware

When you're putting together a home-theater system that can handle 24fps viewing, here's how to ensure you end up with components that can do the job. **Blu-ray Disc player.** Look for a unit designated as a 24p player (short for 24fps progressive).

HDTV. You'll need a TV with a refresh rate that's a multiple of 24. You can take 60Hz operation as a given for any model. But if a TV offers an additional refresh rate, this is often the only one you'll see in the unit's feature list. Currently, the most popular option is a 120Hz refresh rate. Frame rates of 24, 30, and 60 all divide evenly into 120.

BD vs. Upconverting DVD Players

All You'll Need Or Just Enough?

The big question when you're in the market for an upconverting DVD player concerns your budget. Do you want to pay as little as possible for something that will get you by for the next few years? Or are you willing to spend more for a future-proof model?



LG BD390 Network Blu-ray Disc Player
\$399.99
www.lge.com

An upconverting player can enlarge the relatively small video resolution of a DVD to look as good as it can on a high-resolution HDTV. Specifically, it takes a DVD's 480p (480 lines tall) footage and blows it up to 720p, 1080i, or 1080p, depending on the maximum resolution of your HDTV. Some players are better at this than others, and many HDTVs can do a creditable job of upscaling, too. The point is that without any upconversion, DVDs can look fuzzy or blocky on-screen.

Two of the most popular types of upscalers are upconverting DVD decks and Blu-ray Disc players. DVD units with up-conversion capabilities start at about \$65, while a BD player will cost you \$180 or more. The less expensive option will save you money in the short term, but the pricier pick will help you stay abreast of the latest in home-entertainment technology.

First, let's talk about the economy model: an upscaling DVD player. Whatever your budget, make sure that you buy a

player with an HDMI port for a digital connection to your HDTV (assuming your TV supports HDMI, that is). This alone can make a big difference in picture quality. A digital connection removes the need for the player to convert a DVD's video from a digital to analog form in order to pass it over an analog cable to the HDTV, where it will be reconverted back to digital. With each conversion, the video loses another step of clarity, resulting in a sub-standard image. A digital connection such as HDMI keeps the video clean. In short, it's HDMI and resolution-stretching video processing that set an upscaling DVD player apart from non-upconverting models.

On the other hand, there are plenty of reasons to buy a BD player. Besides upscaling your collection of DVDs to fit your HDTV screen, a BD deck has the important distinction of being able to play HD movie discs that take full advantage of your HDTV's image quality. If you have a 1080 set, for example, a BD movie will natively fit the screen pixel for pixel,

resulting in sharpness and clarity an up-converted DVD won't be able to match. Some DVD upscalers produce a very good picture, especially at normal viewing distances, but the quality of BD is even more impressive. Virtually all BD players come with HDMI ports, but you should make sure to buy one with HDMI version 1.3 or later to support advanced color and sound features. And if you don't want to let BD's fantastic image quality go to waste, use an HDMI cable to connect the player to your HDTV.

Even if you have no plans to purchase any BD movies in the foreseeable future, a BD player is still the more forward-looking choice. Some can connect to your Internet service, giving you access to streaming movie rentals and video sites on the Web. And with compatible movie discs, a player with BD-Live support lets you access additional special features online. Considering how much prices have fallen, a BD player has never been more tempting. **LG**

BY MARTY SEMS

It's All In The Video Details

Which HDTV Specs Really Matter?

It's fun to walk down the HDTV aisle at your local electronics store, where you'll be surrounded on all sides by ball games and the latest animated films.

It's not so much fun to try and compare TVs by their long lists of specifications.

In reality, some specs are a lot less crucial than others. This article will help you understand which is which. But remember, when you're ready to buy an HDTV, the most important thing might be how good you think the picture looks.

Important Numbers

First, check an HDTV's resolution. We mean the actual numbers of horizontal and vertical pixels, such as 1,920 x 1,080 for a Full HD television. Don't confuse this pixel count with the TV's list of supported resolutions, as the latter can confuse you. For instance, a 1,366 x 768 (720p) HDTV may support 1080i input, but it will downscale the picture to fit its native resolution, which is 720p. BDs (Blu-ray Discs) carry 1080p video, so they're best-suited to an HDTV with a 1,920 x 1,080 resolution.

For an LCD, the screen refresh rate and anti-judder technologies are important for smoothing out motion in movies.

For instance, an HDTV with a 120Hz refresh rate and an anti-judder feature such as Motion-Flow can make on-screen objects move more naturally.

Finally, make sure that an HDTV has the number and type of ports (such as HDMI and Component video) you need to connect it to your disc player, game console, and/or cable or satellite service.

Other Specs

It's not that other specs aren't important; it's just that an HDTV with better numbers might not necessarily look any better to you.

A prime example is the contrast ratio (the difference between the brightest and darkest thing a TV can show, either simultaneously [static or native] or at different times [dynamic]). An HDTV with a higher contrast ratio than another—make sure you don't compare dynamic to static—will show truer blacks and more detailed dark colors, especially when viewed in a pitch-black room.

What's more important, however, is how the TV's image quality looks to you



under your typical viewing conditions. Ask a store sales associate to let you view the TV in each of its picture modes at their default brightness, contrast, and color settings. Don't pass up a great picture just because of a technically lower contrast ratio.

Stand back about as far from the screen as you would sit in your living room and look for fine video details, such as the textures of fabrics and strands of hair. In dark scenes, you should be able to discern objects in the shadows (again, you may have to try the TV's various picture modes to get the best image). If the HDTV is being fed high-definition video, the scene should be crisp and clear. Finally, look for smooth motion with the set's anti-judder and high refresh rate features enabled, if applicable. **FG**

BY MARTY SEMS

Light Considerations

Nothing To Blink At



When you are shopping for the perfect HDTV for your dream home-theater setup, you need to consider the light that exists in your home-theater room. The amount and type of light in the room should influence your HDTV decision. Natural light, lamps, overhead lights, and the light streaming in from adjacent rooms all play a part in your home-theater lighting situation, and finding the right HDTV to match your needs will deliver the best viewing experience possible.

Room Lighting

The amount of light in a room changes throughout the day—unless, of course, there is no ambient light in the room at all. For example, if your home-theater setup is in a tricked-out finished basement with no windows, there won't be any sunlight creeping in to brighten the room; thus, you have absolute control over your home theater's lighting sources.

On the other extreme, you might want to watch movies and play video games in your family room, which could have several large windows. In this case, the time of day and even the weather strongly affect how much light is in the room. On a sunny winter day with the sun reflecting off of snow, that room will be extremely bright.

Aside from sunlight, the lamps and overhead lights you have in your room should also factor into your HDTV decision. Any eye-level lighting, such as lamps, may

reflect off of your HDTV's screen, affecting the view from certain angles in the room. Overhead lighting likely won't reflect directly off of the screen, but it will fill the room with extra light, so if you watch movies with the lights on, you'll need an HDTV with a high contrast ratio to cut through the brightness.

The Right HDTV

There are some key features to look for when purchasing an HDTV that will help ensure that you get the best picture, based on the light in your home-theater room.

If you have a very bright room, be sure the HDTV you buy has an excellent contrast ratio. The contrast ratio is the difference between the brightest white and darkest black on a given HDTV; the higher the number, the better. An HDTV with a high contrast ratio, such as 5000:1, will make your HDTV's colors bright, and they will pop even in direct sunlight.

The type of finish on the screen should also be taken into consideration. For example, an LCD HDTV with a matte finish is better for rooms with an average amount of light or more, because a glossy HDTV screen will reflect too much light and make it hard to view the video on your HDTV. Conversely, in a windowless room with little sunlight, a plasma or RPTV with a glossy screen can add to a set's contrast ratio.



Note that with a glossy screen, the placement of your HDTV is key. Like your older CRT TV, a reflective HDTV will bounce light toward your seating areas. To prevent glares from appearing on your set, you'll need to position these HDTVs so that light sources don't project onto the screen.

Plasma TVs generally have the best contrast ratios; however, they also have glossier screens, which reflect more light. Contrast ratios on LCDs vary widely, so be sure to check the specifications on an LCD model before you buy; however, an LCD TV with a high contrast ratio can also be an ideal choice for a room with lots of sunlight. If the room has more diffused light sources but is still bright, consider a plasma or RPTV.

There's an HDTV for every type of room. Considering lighting concerns before you buy your HDTV will help ensure that the picture is ideal for your home-theater environment. **fg**

BY SETH COLANER

Make The Move To BD

Enhance Your Home-Theater Experience

When the weekend rolls around, it's time to hit the movies, and tonight's showing has some big surprises in store.

How about free tickets, unlimited popcorn, and a soft recliner? With a BD (Blu-ray Disc) player and movies, you and your family can enjoy the perks of the movie theater from the comfort of your home.

Blu-ray Benefits

Blu-ray offers the best audio and video quality available, transforming your family movie night into a truly cinematic home-theater experience. Although BD movies cost more than traditional DVDs, they boast up to six times the amount of video detail in high definition, rendering the film's rolling ocean waves so realistically that you'll believe you're standing at the shore's edge. In addition to HD video, BD movies also feature higher-quality audio formats, often in the form of lossless or uncompressed audio, which means you'll fully hear every sweet nothing that the prince whispers to the princess.

BDs can also hold more data than DVDs, which means there's more room on each disc for special features. Get a behind-the-scenes look at your favorite movie and learn about how it was

made, play interactive games with the movie's characters, or sneak a peek at never-before-seen deleted scenes.

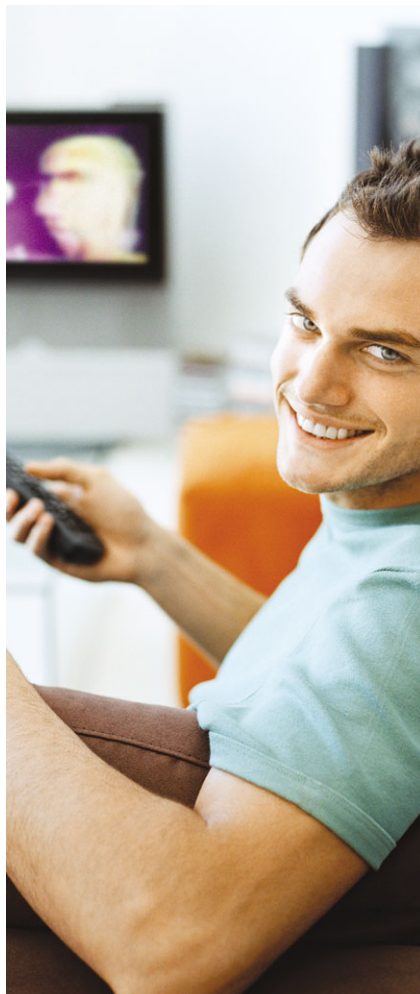
Just when you think the show's over, there's even more you can do with Blu-ray. With a BD Live-compatible player and an Internet connection, BD Live movies let you download additional content and bonus features online and update or upgrade your player.

In addition to better picture and sound, BD movies are more durable than DVDs and won't scratch as easily, so you can rest easy when the kids are setting up their own cinematic adventures while you take care of dinner. And there's no need to worry about not being able to view your existing DVD collection; BD players will upscale your DVDs to a higher resolution, making them look better than ever.

Better Than The Theater

Blu-ray can change the way you and your family view a night at the movies. Enjoying a great film together doesn't mean you have to shush the chatting in the row ahead of you or wonder what sticky substance you just put your shoe in. With Blu-ray, you can truly sit back, relax, and enjoy the show. **FG**

BY KRIS GLASER



Get The Optimum Performance

You can feel immersed in every moment of a wild car chase, an action-packed sword fight, or a tranquil horseback ride through the forest. In order to get the most vivid picture from your BD player and movies, you should have an HDTV with 1080p resolution. Surround-sound speakers will engulf you in the moment and bring any scene to life. And to ensure you're getting the best picture and sound, you should budget for accessories such as HDMI cables, too. ●

Mount Your Flat-Panel HDTV

Hang 'Em (Not So) High

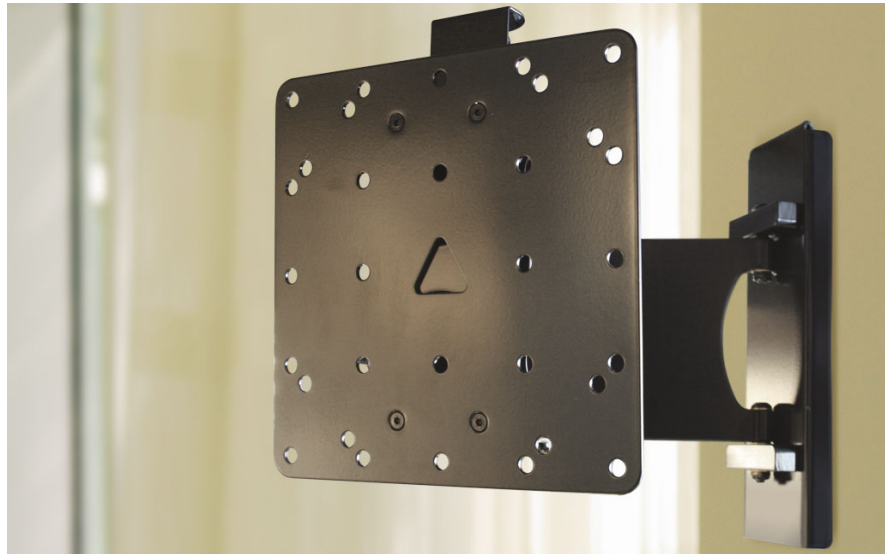
There's something anti-climactic about bringing home a beautiful, thin LCD or plasma HDTV and then setting it on the same stand that supported your last TV. To truly turn your living room into a modern-looking home theater, consider mounting your new flat-panel entertainment piece on the wall ... like a work of art.

A wall mount can give the room a clean, 21st-century look. Typically, a wall mount is a set of metal brackets that screws into your wall and bolts to the back of your HDTV. In most cases, you'll hardly see the mount after it's installed; it will be hidden behind the TV.

There are scads of mounts on the market, but the better ones let you tilt and turn your HDTV to cut window glare or improve the picture quality. For instance, many flat-panel sets look their brightest when you tilt them to face you squarely, meaning that their screens are perpendicular to your line of sight.

Vendors rate their wall mounts by the range of diagonal screen sizes they can support. For instance, a mount may specifically support most flat-panels with screens measuring 30 to 50 inches corner to corner. Note that plasma screens are typically heavier than LCDs, so double-check your plasma's weight against the carrying capacity of any mount before you buy.

Of course, a wall mount has to fit the mounting holes on your HDTV, too. Before you buy, be sure to look up



your TV's mounting pattern, such as VESA (Video Electronics Standards Association) 75 or 100 x 200mm, in its users manual or online. Alternatively, grab a metric measuring tape and write down the distances between the set's

top/bottom and left/right mounting holes. Your CE retailer's friendly sales associate can help you find a mount that's a sure fit.

If you install the mount yourself, take care to fasten it levelly and securely to your wall. If you have sheetrock walls, for example, make sure to drill into the centers of the studs. Resist the urge to put the HDTV high on the wall. Instead, mount it at your *seated* eye level to avoid neck strain.

Some do-it-yourselfers route their TV cables through holes covered by decorative wallplates. Others hide the cables under conduit (also called raceways, trunking, or cable ducts).

Finally, don't forget to grab two helpers to assist you. They can hold your HDTV as you attach it to the new mount. **EG**

Call The Agents

If you'd rather leave something like this to the professionals, take a look at Geek Squad's TV Mounting services (\$150 to \$350 depending on screen size; www.geeksquad.com, click on TV Setup And Mounting). They have the tools and the talent to hang your flat panel on the wall and make the installation look great. More importantly, they can do the job safely without putting your HDTV at risk. ●

BY MARTY SEMS

HDTVs

Screen Technology Differences



LCD (liquid-crystal display)

Pros

- LCDs can use one of two backlight technologies. CCFLs (cold cathode fluorescent lamps) are the most common, but LEDs are the latest backlight technology to hit the LCD scene. (See the LED section for more info on LED TVs.)
- The thin profiles and light weight of LCDs make them easy to mount on a wall.
- Power demands are a bit lower than comparably sized plasma displays and considerably lower than CRT televisions.

Cons

- Fast-moving images may suffer from a slight trailer effect, but with improved

LCD technology, the effect is barely perceptible.

- When pixels stick on or off, they show up as either a pinpoint of bright light or black, which can be distracting on-screen.
- From certain viewing angles, LCDs will lose video contrast and color.
- LCDs with CCFL backlighting suffer from leaking light, and unlike LEDs, they can't dim certain areas on-screen. This may result in blacks and whites that appear more gray in color.

Best For

- Streaming PC content
- Bright, sunny rooms

LED (light-emitting diode)

Pros

- LED TVs are actually a type of LCD TV. These sets use one of two LED backlight technologies:
 - Full-array lighting places LEDs behind the screen in a grid pattern, letting the TV dim certain LEDs for the best contrast ratios available.
 - Edge-lit sets have LEDs placed around the frame of the TV and light is directed toward the center of the screen. Edge-lit models cost less than full-array sets and are a lot thinner.
- By using LEDs, these sets use a lot less electricity than other HDTVs, and

they don't contain harmful mercury.

- Overall, LED TVs are one-third thinner than other LCD TVs and have longer life spans.
- Plasmas are well known for their deep blacks and crisp whites and fast response times, but LED TVs closely match in performance.

Cons

- These sets are costly because they feature a relatively new technology
- Blooming, or a halo effect, may encircle bright images that are on dark backgrounds.

Best For

- Eco-conscious viewers
- Fast-paced gaming

Plasma

Pros

- A plasma TV's phosphors light up evenly across the screen to create images, which are consistently bright and clear with vibrant colors.
- The contrast ratio is high, so you'll see some of the darkest blacks and brightest whites.

- The design and technology of plasma TVs lend themselves to large screen sizes—typically 50 inches or greater.
- Rapid pixel response means no blurry motion.
- Wide viewing angles give you the same high-quality images on-screen no matter where in the room you happen to be sitting.

Cons

- Some plasmas are susceptible to image burn-in if not cared for properly.
- Low air pressure and high altitudes may cause plasmas to buzz.
- Some plasmas have highly reflective glass, which isn't ideal in sunny settings.

Best For

- Large groups that watch TV together
- Movies or sports with nonstop action

RPTV (rear-projection TV)

Pros

- RPTVs are surprisingly lightweight for their sizes.
- You'll find exceptional picture quality on very big screens (65 inches and larger).

- As screens get bigger, RPTVs tend to be more cost-effective than an LCD, LED, or plasma TV.

Cons

- With depths of 16 to 24 inches, these TVs are far too big and bulky to mount on a wall.

- RPTVs require costly lamp replacements every few years

Best For

- Anyone who wants to bring a cinematic experience home
- Big, roomy home theaters

FirstGlimpse

Essential

THINGS TO KNOW

HDTV VIDEO RESOLUTIONS

Q What is resolution?

A Resolution is the size of a video clip, TV screen, or computer monitor expressed in the number of its horizontal and vertical pixels, such as 1,920 x 1,080.

Q What are pixels?

A Pixels, or picture elements, are the smallest units of a video clip or display that can be of any color or brightness. The more pixels you have, the higher the video resolution and detail.

Q What are subpixels?

A In a TV or monitor, each pixel is made up of three smaller subpixels colored red, green, and blue. As each subpixel's brightness changes, so does the color of the pixel.

Q What are 720p, 1080i, and 1080p?

A These are common high-definition video resolutions. 720p (1,280 x 720) and 1080p (1,920 x 1,080) have progressively scanned pictures, while 1080i's video is interlaced.

Q What is progressive video?

A An HDTV shows each frame of progressively scanned video all at once, instead of in alternating, interlaced lines. Progressive video looks better for most (but perhaps not all) content.

Q What is interlaced video?

A An HDTV presents interlaced video as alternating fields of odd or even horizontal lines. Two fields make one frame of video. 1080i usually displays at 30 frames (60 fields) per second.

Q What is the best HDTV resolution?

A Right now, 1080p is the top resolution commonly available in HDTVs. Manufacturers often refer to 1080p as Full HD.

Q Will a 1080p set play 720p and 1080i content?

A Yes, because HDTVs are downward-compatible. Using upconversion (electronic enlargement), a 1080i set will play 720p video, for instance. All HDTVs play standard-definition content, too (480i/p).

Q How can a 720p HDTV claim to support 1080i video?

A Many 720p sets can downscale, or shrink, 1080i content to their native resolutions, such as 1,366 x 768. Downconversion loses some image quality, however.

Q What resolutions are Blu-ray Disc and DVD?

A Blu-ray Disc offers a 1080p image in a widescreen format. DVD comes in 480p resolution in either widescreen (720 x 480) or so-called fullscreen (640 x 480) versions.

Q How can I make DVD look good on my HDTV?

A Use an upscaling DVD or BD player set to your HDTV's resolution. Also, to maintain an all-digital video connection, use an HDMI cable to connect your disc player and TV.

Q What are aspect ratios?

A The relationship between a video clip's or screen's pixel width and height. Widescreen TVs generally have 16:9 ratios, and standard TVs have 4:3 aspect ratios.



Which LCD TV Is Best For You?

So you've decided to get an LCD TV. The next step is deciding *which* LCD TV to invest in. With all the models on today's market, you want to be sure the model you select is the best for you and your family. Refer to this chart for further help when shopping.

		Size	Dimensions; Weight**	Native resolution	Viewing angle	Inputs	Outputs	Refresh rate
What It Means		The diagonal measurement of the TV's screen	Height x width x depth; how much the TV weighs	A fixed TV resolution; images are best displayed in the native resolution	The maximum angle at which the viewer can see the screen clearly	Inputs let you connect your components to your TV	Outputs transfer information from your TV to peripherals, such as audio to speakers	Speed at which a screen is redrawn every second
	Proscan 40LC45S MSRP: \$579.99* SKU 9329381	40 inches	25.5x39.1x4.2 inches; N/A	1080p	N/A	3 HDMI; 2 Component; 1 PC; 2 Composite; 1 S-Video; 1 RF	2 audio	60Hz
	Insignia Advanced Series NS-L42X-10A MSRP: \$799* SKU 9202374 <i>See p. 8</i>	42 inches	40.2x26.2x5.5 inches; 43 pounds (with stand)	1080p	176 degrees	5 HDMI; 2 Composite; 2 S-Video; 2 Component	2 audio	120Hz
	Panasonic VIERA TC-L37X1 MSRP: \$799.95* SKU 9235124	37 inches	22.8x36.1x3.9 inches; 36 pounds (with stand)	720p	178 degrees	3 HDMI; 1 DVI; 1 S-Video; 1 Component; 2 Composite; 1 PC; 1 RF	1 audio	60Hz
	LG 42LH50 MSRP: \$1,699* SKU 9321637	42 inches	25.9x41.4x3.6 inches; 37.9 pounds	1080p	178 degrees	4 HDMI; 2 Component; 2 Composite; 1 RF; 1 USB; 1 LAN	1 audio	N/A
	Samsung LN46B640 MSRP: \$1,899* SKU 9293506	46 inches	30.4x46.1x3.1 inches; 44.8 pounds	1080p	N/A	4 HDMI; 2 Component; 2 Composite; 2 USB; 1 PC	N/A	120Hz
	Sharp AQUOS LC-52D85U MSRP: \$2,299.99* SKU 9034243	52 inches	31.34x49.3x3.16 inches; 52.9 pounds	1080p	176 degrees	5 HDMI; 2 Component; 2 Composite; 1 S-Video; 1 PC	N/A	120Hz
	Toshiba Regza 55ZV650U MSRP: \$2,399.99* SKU 9315877	55 inches	35.5x53.6x15.6 inches; 80.5 (with stand)	1080p	N/A	4 HDMI; 2 Component; 2 Composite; 1 S-Video; 1 PC	1 audio	120Hz
	Sony Bravia KDL-46XBR8 MSRP: \$4,699.99* SKU 8996508	55 inches	53.62x33.03x4.43; N/A	1080p	N/A	4 HDMI; 1 S-Video; 2 Component; 1 PC; 1 USB; 1 SD	2 audio	240Hz

*Prices listed in this issue are for general reference and may vary from retailer pricing.

**unless specified, this is without stand

Which Plasma TV Is Best For You?

If you're planning on buying a plasma HDTV, it might be hard to decide on one just by looking at a wall of gorgeous sets. Refer to this chart for further help when shopping.

		Size	Dimensions; Weight**	Native resolution	Viewing angle	Inputs	Outputs	Refresh rate
	What It Means	The diagonal measurement of the TV's screen	Height x width x depth; How much the TV weighs	A fixed TV resolution; images are best displayed in the native resolution	The maximum angle at which the viewer can see the screen clearly	Inputs let you connect your components to your TV	Outputs transfer information from your TV to peripherals, such as audio to speakers	Speed at which a screen is redrawn every second
	Samsung PN42B450 MSRP: \$799.99* SKU 9235259	42 inches	26x41.6x2.9 inches; 61.3 pounds	720p	N/A	3 HDMI; 1 Composite; 1 PC	N/A	600Hz
	Panasonic VIERA TC-P42X1 MSRP: \$899.95* SKU 9219213	42 inches	N/A	720p	N/A	3 HDMI; 1 S-Video; 2 Component; 2 Composite	1 audio	N/A
	Panasonic VIERA TC-P50X1 MSRP: \$1,099.95* SKU 9219062	50 inches	32.125x48x4.125 inches; 75 pounds	720p	N/A	3 HDMI; 1 S-Video; 2 Component; 2 Composite	1 audio	60Hz
	Samsung PN50B450 MSRP: \$1,199.99* SKU 9239371	50 inches	29.5x48.1x2.9 inches; 77.2 pounds	720p	N/A	3 HDMI; 1 Composite; 1 PC	N/A	600Hz
	Insignia NS-P502Q-10A MSRP: \$1,299.99* SKU 9299886	50 inches	32x48.4x11.8 inches; 72.7 pounds	1080p	N/A	2 HDMI; 2 Component; 1 Composite; 1 RF	N/A	60Hz
	LG 50PG60 MSRP: \$2,499.95* SKU 8962045	50 inches	31.2x48.7x3.1 inches; 87.5 pounds	1080p	N/A	4 HDMI; 2 Component; 1 S-Video; 1 RF; 1 PC	3 audio	180Hz
	Pioneer KURO PDP-5020FD MSRP: \$2,499* SKU 8869147	50 inches	28.4x48.6x3.6 inches; 74.1 pounds	1080p	N/A	4 HDMI; 1 Component; 3 Composite; 1 PC; 1 RF	3 audio	60Hz
	Pioneer PRO-141FD MSRP: \$7,000* SKU 8982979	60 inches	34.5x57.68x2.53 inches; 110 pounds	1080p	N/A	4 HDMI; 1 Component; 1 Composite; 1 PC	N/A	60Hz

*Prices listed in this issue are for general reference and may vary from retailer pricing.

**unless specified, this is without stand

Choose The Right Sanus TV Mount

SANUS
SYSTEMS

The Sanus VisionMount line of universal wall mounts provides a variety of smart ways to display your flat-panel TV. In addition to complementing its sleek design, securing your TV to the wall saves space, adds safety (no accidental bumping or falling), and discourages theft. Sanus also offers MountFinder, available at mountfinder.sanus.com, to help you find all compatible mounts for your specific TV. For more information on Sanus mounts, visit Sanus.com or BestBuy.com.

Full-Motion Mounts



Tilting Mounts



Low-Profile Mounts



Vertical AV Foundations



Television Size & Screen Technology

13- To 26-inch LCD TVs

For perfect viewing from anywhere in the room. Extend, retract, tilt, and swivel your TV.

SF213
SKU 9004356



MF215
SKU 8327697



26- To 42-Inch LCD TVs

MF110
SKU 8180648



MF215
SKU 8327697



VM400
SKU 7041373



37- To 56-Inch LCD Or Plasma TVs

VMAA18
SKU 7439765



MT25
SKU 6948798

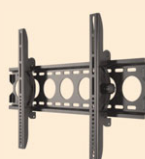


ML22
SKU 7022919



42- To 63-Inch LCD Or Plasma TVs

VMPL50
SKU 7859249



VMPL3
SKU 7269546



LT25
SKU 8911984



LL22
SKU 8911975



Combine the storage and capacity of a cabinet with the discreet look of a low-profile wall mount that will complement any decor.

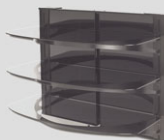
VF2012-B1
SKU 8783925



VF2022-B1
SKU 8783934



VF5023-B1
SKU 8881249



VF5022-B1
SKU 9037062



VisionMount Size

DLP HDTV

Large Screen Entertainment



**Mitsubishi 837 Series
1080p Home Theater
TVs (WD-65837/WD-
73837)**

MSRP: 65-inch model \$2,199
SKU 9330761

MSRP: 73-inch model \$2,999
SKU 9330841

www.mitsubishi-tv.com/htt

Quick Overview

The Mitsubishi 837 Home Theater TV outshines other smaller DLPs on the market, thanks to its exceptional entertainment experience. The UltraThin Frame won't overwhelm your home-theater room and the high-end video performance features, such as Perfect Color, PerfectTint, and Dark Detailer, will display an impressive image across the screen. Above all, the Mitsubishi 837 features high energy efficiency, consuming half as much power as comparable flat panels.

Perfect For

Anyone who wants to go green yet still enjoy an outstanding visual experience.

Outstanding Benefits

- **3D Viewing capabilities:** 3D-ready for multidimensional movies and games*
- **Expansive screen size:** 73-inch screen size offers more than enough viewing room
- **Customized Video Modes:** Brilliant, Bright, Natural, Game, ISF Day, and ISF Night
- **Enhanced energy efficiency:** Energy Star 3.0 rating
- **Improved Processing:** Plush1080p 5G 12-bit processing
- **Improved Video Noise Reduction:** Clears up video distortions to provide a brilliant image

Coollest Feature

Watch the latest 3D movie or game releases using the Mitsubishi 837's 3D-ready capabilities. Visit Mitsubishi-TV.com/3D for more information.

* 3D video, gaming and dual-screen features require compatible 3D source devices, 3D glasses and IR emitters. In order to display 3D images, Mitsubishi Home Theater DLP™ TVs and LaserVue™ TVs require source devices to support checkerboard display formats for display of 3D gaming or 3D cinema content. A 3D standard format does not currently exist for Blu-ray™ or DVD prepackaged media. A 3D standard may emerge that is not compatible with Mitsubishi Home Theater DLP™ TVs or LaserVue™ TVs.

Accessories & Services

As you head toward the HDTV section of your local consumer electronics store, you'll invariably pass shelves of bland-looking HDTV accessories. Sure, these accessories have multichannel audio, gold-plated connectors, nitrogen-injected insulation, and fully articulating mounting arms, but they

can't compete visually with their big-screen flat-panel HDTV counterparts. Despite outward appearances, however, there are a handful of accessories that are vital to getting the most from your HDTV. The following is a rundown of accessories we recommend to complete your home-theater setup. **FG**

WALL MOUNTS & BRACKETS

- Let you view your HDTV from the best possible angle
- Give you the ability to adjust your HDTV when necessary
- Maximize space in your living area

HDMI CABLES

- Carry uncompressed digital audio/video signals to and from your HDTV and its components
- Shielding in higher-end models eliminates interference from other components
- Well-built connectors ensure a snug, stable fit

CLEANING KIT

- Protect your HDTV's screen by using specially formulated sprays and cloths
- Eliminates the dangers of scratching delicate screens
- No-drip formulas prevent damaging other home-theater equipment

CORD-CONCEALMENT KIT

- Hide multiple cords while keeping them organized
- Minimize cord clutter, especially with wall-mounted sets
- Keep the focus on your new HDTV, not the cords connected to it

UNIVERSAL REMOTE CONTROL

- Simplify your home-theater setup with one remote that can control all of your components
- Program functions to watch a movie with the click of one button, for example
- Easily view options in the dark with a backlit LCD

SURGE PROTECTORS/POWER CONDITIONERS

- Save your home theater from potential damage by using a surge protector that will absorb electrical fluctuations
- Filter out "dirty power," also known as electrical "noise" and radio interference, that can degrade your home theater's audio and video, with a power conditioner
- Have peace of mind knowing that your home theater will give you its peak performance for the longest amount of time

SURROUND-SOUND SYSTEM

- Maximize your HDTV experience with more theater-like audio
- Feel like you're in the movie scene instead of just watching it
- Even out softer and louder programming with an equalizer

TV STANDS

- Offer flexibility if you're unable to mount your HDTV on the wall
- Available in a variety of finishes to match any décor
- Provide a place for additional home-theater equipment

HOME-THEATER SERVICES

A home theater is a pretty big investment, so it's wise to consider letting a professional handle your installation and setup. Let your local CE retailer tackle the following tasks, and you'll be able to enjoy the full glory of HD in no time.

- Home Theater In-Home Consultation
- TV Recycling
- TV Calibration
- TV Mounting & Cord Concealment
- Remote Control Programming
- Speaker Setup

Insignia NS-DSC10 Camera
\$89.99
www.insigniaproducts.com

Insignia's NS-DSC10 Digital Camera

Get More Bang For Your Buck

At some point, every kid wants to learn how to take a few pictures with the family camera, but aside from the fact that your camera may be too complicated for him to use, every parent knows that it's not always advisable to put an expensive piece of equipment in the hands of a young person. He needs his own camera.

His First Digital Camera

Insignia's NS-DSC10 (\$89.99; www.insigniaproducts.com) makes a great first camera for your little one. The 10MP camera is easy to use and will help Junior learn how to use a digital camera without endangering your more expensive one.

The camera ships in Simple Mode, which is a function that hides the more advanced settings from the user to give a rookie shutterbug an easier-to-use camera. With a certain amount of internal memory available, all you need to do to get your child snapping photos is pop in two AA batteries. When he's ready for more advanced features, he can turn off

Simple Mode to access the NS-DSC10's ISO settings and Stabilizer function to give him more control over the camera's performance in different lighting conditions. As he uses more complex settings, the Help Text feature will explain each function on the LCD screen so that he doesn't need to study the users manual.

A Perfect Gift For Teens

Teens are eager to discover new things and constantly on the move. The NS-DSC10 is a great gift for a teen interested in documenting her adventures in newfound freedom and independence. Whether it's snapping photos of her friends on the way to a volleyball game or taking video of a family road trip to visit colleges, this camera will capture it all.

Adding an SD (up to 4GB) or SDHC (up to 16GB) card is ideal, as that will ensure she can take as many photos and video of the last night of summer as she wants without running out of storage space. And because the Insignia NS-DSC10 can turn on and be picture-ready in 1.5 seconds, she won't miss any picture-worthy moments.



Camera No. 2

Every parent knows that having a backup—whether it's extra diapers or a babysitter on speed dial—is part of parenting. So why not have a backup camera? The Insignia NS-DSC10 is a low-cost option for families who could use a second camera to capture all of their brood's antics.

The NS-DSC10 is compact enough to fit in your pocket, and with a large 2.5-inch LCD screen, you'll be able to frame and snap photos at the right moment. The 3X optical zoom feature lets you get in close to the action, and the Shake Warning will let you know if the camera needs to be steadied in order to get the photos you want.

The Insignia NS-DSC10 is a compact, easy-to-use camera, and it's ideal as a gift or smart photography option for those who want a low-cost camera with desirable features. **FC**

DIGITAL IMAGING

Automatically Improve Your Photography

Enhance The Details

You can touch up a lot of a photo's imperfections caused by irregular lighting or unpredictable subjects using a photo-editing program; however, there are many features already built into your camera that can save hours of editing in the future.

Early Detection

Before you snap that series of family reunion photos, check your camera for settings that will prevent flaws in your photos. Face detection will keep faces clear by identifying a face and automatically refocusing to distinguish it in the picture, rather than something in the background. Smile detection works in a similar way: It's a feature that recognizes when someone smiles, then snaps a photo instantaneously when they do.

What's the most common way for someone to ruin a photo? Blinking, of course. However, a camera with blink detection capabilities won't let you take a picture without ensuring that everyone has their eyes open. Or, if someone does blink, the setting will display a warning to inform you that you should take the photo a second time. Also, red-eye detection or reduction is a customized setting that helps keep brown eyes brown and blue eyes blue, rather than red, when you're snapping photos using a flash. Photo subjects typically suffer from red-eye when they're photographed with a flash while posing in a dark setting.

Stabilizing The Picture

Camera shake is a photographer's foe. Fortunately, image stabilization can help produce sharp images, even when the camera is unsteady. So, if you're hiking



unpredictable terrain or using a long and awkward lens to capture your daughter's moves at her dance recital, image stabilization can help prevent blur in your photos.

Shooting Modes

Most cameras have scene recognition modes, which automatically adjust your camera's settings to correspond with both the subject and environment. This feature delivers optimal results without changing complicated camera settings. Standard modes include auto and manual, but beyond this, scene modes can include portrait, night, sports, landscape, party/indoor, beach, sunset, museum, and fireworks. Manual mode is ideal for the photographer who wants to control every camera feature while snapping an intricate photo, but auto mode is best for amateur photo capturing.

Staying Sharp

Take advantage of these useful features when you're preparing to take a family photo or shoot a series of nature stills—you will get more impressive photos out of what you shoot so you can share quality photos with others. **EG**

Get The Right White

White balance controls the accuracy of the colors in your photo. For instance, when you take a landscape photo, there could be too much of a single color, which can wash out the entire photo. Adjusting the brightness levels on your camera to create a properly lit photo is important, regardless of the time of day, location, or subject. To adjust lighting conditions correctly, use white balance modes such as auto, manual, daylight, incandescent, fluorescent, overcast, or flash, based on the lighting conditions within the subject's environment. You might see alternative settings that include shade, tungsten, or open shade on some camera models, denoting more specific white balance adjustments. ●

Storage For Your Photos & Videos

Keep Your Digital Collections Safe

Summer has the potential to produce several occasions for capturing hundreds of photos and hours of video, including weddings, family gatherings, and vacations. Once the sun sets on another summer season, you will probably be wondering where you can store all of your digital memories.

If your digital camera or camcorder uses memory cards, that's the first place your digital content will be stored. Memory cards, however, are fragile and small (which makes them easy to lose and break), so consider saving your photos and videos on a hardware device that's meant for long-term storage.

Flash Drives

Flash drives are high-speed storage devices that are small enough to slip in your purse or briefcase but are harder than memory cards because of their durable exterior. They are relatively inexpensive and generally offer between 2 and 8GB of storage, but they can reach up to 32GB. Flash drives can store fewer digital files than other portable devices, such as portable hard drives, so they are best suited for the images of a single event. For example, an 8GB flash drive can store approximately 2,500 images, while a 320GB portable hard drive can store up to 64,000 images. However, be sure to note that the number of images you can store depends on your camera's



megapixel count and the file format your photos are saved in.

External Hard Drives

Because of the high storage capacity external hard drives offer, they make better long-term storage options. External hard drives have capacities that range from 100GB to 2TB of storage space, which means with the right external hard drive, you can back up your whole photo and video library as well as many other files stored on your hard drive. These are ideal for someone who has large quantities of HD video or high-resolution (7MP or more) photos. External hard drives generally connect through your computer's USB, FireWire, or eSATA port.

Because some external hard drives are about the size of your hand, they are perfect for carrying them with you in your purse, briefcase, or book bag.

Students or frequent travelers will enjoy the portability and flexibility of these.

CDs, DVDs & BDs

CDs, DVDs, and BDs (Blu-ray Discs) are other storage solutions if your PC is equipped with a CD, DVD, or BD burner. DVDs can store more media than CDs, and BDs are designed for large digital media files, such as high-definition content. For more information about burning HD video to DVDs and BDs, go to page 27.

Regardless of how you decide to store your content, using the right storage solution is vital to protect your memories. It will make carrying around and sharing your digital files easier and make certain you can enjoy your photos and videos for years to come. **FG**

BY TESSA WARNER BRENNEMAN

Upgrade To A New View

The Benefits Of HD Camcorders

If you've tried watching home videos recorded on an old SD (standard-definition) camcorder on an HDTV, you know that there's a big video quality difference between your home videos and the high-definition content you regularly see. In this article, we'll explain the benefits of HD camcorder video quality and advantages of using an HD camcorder with your home theater or PC.

Crystal Clear Video

HD camcorders provide a substantial improvement in video quality because the high-resolution format records greater detail, broader color depth, and sharper video images than SD. It's also worthwhile to note that HD camcorders capture video in the widescreen format, also known as 16:9, so you won't see the black bars that appear when you play back video in the 4:3 format on an HDTV.

HD camcorders may capture video at 720p, 1080i, or 1080p, and models that record in 1080p are often listed as Full HD or True HD because 1080p provides higher resolution than 720p and better image quality than 1080i resolutions.

HD Camcorders & HDTVs

Typically, HD camcorders include the cables you'll need to connect the camcorder to your HDTV, and many offer an HDMI output, so you can play back your



HD content over the highest-quality (uncompressed digital video and audio) connection. Additionally, most provide

For The Record

There are two common HD video recording formats, AVCHD (Advanced Video Codec High Definition) and HDV (high-definition video). The AVCHD format requires more storage space per minute than HDV, so your camcorder's storage media will fill up faster. AVCHD lets you record to DVDs and hard drive or flash memory, while the HDV format can be recorded to DVC and MiniDV cassette tapes. To edit these video formats, AVCHD video can be dragged and dropped to your hard drive using special software (it may still need to be converted), while HDV requires you to play back the video by connecting the HD camcorder to your PC. ●

an integrated microphone or external microphone port that can capture a multichannel digital audio recording format, such as Dolby Digital 5.1 surround sound. If your home theater has a surround-sound audio setup, you can experience the spatial sound effects and distinct voice separation of multichannel audio.

HD Home Videos & PCs

For those who prefer to edit their videos to add special effects and polish footage, HD camcorders allow you to transfer video in near-HD quality to your PC. An important item to note when editing—you'll need software that is compatible with your HD camcorder's video recording format. (See the "For The Record" sidebar.) After you've edited your high-quality footage, if your PC features a BD (Blu-ray Disc) burner, you can burn your video creation to share with friends. **FG**

BY NATHAN LAKE

Share Your HD Video

Transfer, Edit & Burn



our summer road trip was grand, and you captured all of the beautiful scenery on your HD camcorder. You'll want to burn the HD video to disc so you can simply load the disc in your disc player. Here, we'll outline what you'll need to transfer, edit, and burn HD video onto disc using your PC.

Software

Many HD camcorders record video in the AVCHD (Advanced Video Codec High Definition) or HDV (high-definition video) formats, which use compression techniques to save hard drive space while preserving video quality. Your PC must have video-editing software that supports either standard, or you won't be able to play or edit your HD movies. Compatible software will convert the clips into a format that you can play on a PC or on a

BD or upconverting DVD player. If your video-editing software doesn't support AVCHD, you might need to update the application by visiting the manufacturer's Web site or purchase a new application.

Hardware

Although you might be able to import the video onto your PC, the computer

may not have the processing power to quickly play, edit, and render HD movies, due to the greater amount of data in HD video. Check the minimum system requirements on your video-editing program to see if your PC is up to snuff. A BD burner and BD media are ideal because a single-layer BD can store more data than a single-layer DVD.

Import & Burn

Nearly all video-editing software also includes utilities to create menus, add titles, and burn your HD movies to disc. To import your video onto your PC, connect your camcorder to your PC via a USB 2.0 or FireWire cable port. Open your video-editing application and use the software's playback controls to select and digitize the footage you want to edit on your PC. You can enhance your video by adding effects and other mood-setting transitions before you burn it to disc. **PG**

BY NATHAN LAKE

Disc Storage Space

The amount of HD video you can record depends on the video resolution and bit rate you choose for your video. The bit rate settings control how much the video-editing software compresses the video; a higher bit rate will produce better video quality. The following chart assumes you're using a 1080p resolution and 24Mbps rate.

Type Of Media	Storage Capacity	Estimated Amount Of HD Video It Can Hold
Single-layer DVD	4.7GB	17 minutes
Dual-layer DVD	8.5GB	30 minutes
Single-layer BD	25GB	90 minutes
Dual-layer BD	50GB	180 minutes

Get To Know CMOS

The Eye Of The Digital Camera

W

hen shopping for a digital camera, digital camcorder, or mobile phone, you'll often see the acronym CMOS

(complementary metal-oxide semiconductor) listed next to the device's megapixel rating. CMOS is the image sensor, which means that it's responsible for converting light into an electronic signal. In this article, we'll explain what the CMOS is and how its size can affect the quality of your images.



Light Becomes Data

The CMOS is a silicon chip that's covered in millions of light-sensitive picture elements—aka pixels. Think of each minuscule pixel as an eye and the CMOS as the brain. The CMOS collects the data from every pixel and forms the information into a digital image. The number of pixels on the CMOS equates to the megapixel rating of a digital camera—but there's more to a CMOS sensor than just its pixel count.

The physical size of the CMOS can significantly affect the quality of your images. If two cameras had the same megapixel rating but different-sized CMOS sensors (all other things equal), the camera with the larger CMOS would take better pictures. The camera with the larger CMOS would capture more light than the smaller CMOS, resulting in images that display more true-to-life color and less image grain. In particular, a camera with a larger CMOS would perform better in low-light situations, such as a twilight

baseball or football game, because the camera could detect a greater amount of light. The greater light-capturing ability would also allow the camera to produce darker blacks and brighter whites.

CCD & CMOS

Not all digital cameras and camcorders use a CMOS image sensor; some models

feature a CCD (charge-coupled device). Experts regularly disagree about which type is better, and both types can be found in low- and high-end cameras. On the plus side, CCD and CMOS sensors function in a similar manner, and you can apply the CMOS sensor size guidelines listed below to CCDs. **FG**

BY NATHAN LAKE

It's Not About The Megapixels

The more megapixels your digital camera offers, the larger the photographs you can create with the digital images. But unless you need poster-sized prints, a 7MP or 8MP camera provides you enough pixels to produce film-quality (300 ppi [pixels per inch]) photos at a variety of sizes—including prints up to 8x10. ●

Camera Resolution	Maximum Print Size
Megapixels* (WxH pixels, approx.)	At 300 ppi (WxH inches, approx.)
5MP (2,592 x 1,944)	6x8
6MP (2,816 x 2,112)	7x9
7MP (3,072 x 2,304)	7x10
8MP (3,264 x 2,448)	8x10
9MP (3,488 x 2,616)	8x11
10MP (3,888 x 2,592)	8x13

*Megapixel = 1 million pixels

Give The Gift Of Effortless Memory Sharing

Eye-Fi Share Video Card

Holidays and special events are all about sharing in a joy-filled time—especially during the Fourth of July and BBQs. But these occasions are also about watching nostalgic videos or capturing images of friends and family. We want these times to be characterized by laughter and entertainment without having to think about the time it will take to upload video and photos to a PC.

The Eye-Fi Share Video memory card (\$79.99; www.eye.fi) will effortlessly transfer your videos and photos to a PC for you. On top of that, it's an SDHC memory card that's ideal for anyone who wants to quickly share memories from their summer adventures with loved ones.

A High School Grad's Summer

The summer that follows your daughter's high school graduation is bound to be full of excitement. It may be the last time she'll be able to hang out with childhood friends before she starts her path to adulthood. To help your recent grad chronicle her last days of being carefree, an Eye-Fi Share Video card is ideal.

Your graduate will be able to record video of her final time living at home, take her digital camera on her graduation cruise, and enjoy the gift of quick and easy wireless transfers. Then she can upload pictures and videos to her

laptop and media sites when she returns.

For A Fully Scheduled Mom

You know your mom likes to take her digital camera with her everywhere she goes. She'll record video of your younger siblings performing at their school recital or snap photos of a well-manicured garden she saw down the street.

However, she may not have time to upload this media manually. The Eye-Fi Share Video makes it much easier for her to transfer her photos to her PC because she can simply set her camera on the coffee table and turn it on. The Share Video card will instantly upload media across the room so all of her friends and family can stay connected to her life.

Dad's Day Out

Your dad received a new waterproof digital camera from your brother for Father's



Eye-Fi Share
Video card
\$79.99
www.eye.fi

DIGITAL IMAGING

Day, and he's learned how to take a lot of impressive pictures while fishing at his favorite lake. Still, you know he may not want to waste time learning how to upload these images to a notebook. Now that his birthday is quickly approaching, you know exactly what he'll want: an Eye-Fi Share Video memory card. With 4GB of capacity, he can take plenty of photos during his day while he's on the water with his friends, and he'll never have to think about connecting his camera to his PC while he hassles with photo transfer steps.

Hands-Free Memory Card

Regardless of the recipient, the Eye-Fi Share Video card simplifies our digital lives. It's sure to be a unique gift idea for the people you care about the most. **FG**

Optical vs. Digital Zoom

See The Difference



The zoom lens is a wonderful tool. You can zoom out to capture a wide-angle landscape or zoom in and use the camera's telephoto capabilities to bring a distant subject even closer. When shopping for a point-and-shoot camera (as opposed to a D-SLR), you'll notice that each camera features an optical zoom and a digital zoom. Before you get too enthusiastic about having the extra telephoto capabilities of a digital zoom, it's important to understand the difference between optical and digital zoom and how they affect image quality.

For both examples, we will imagine that we're taking pictures with a 5MP camera that is set to capture images at the highest quality level.

Optical zoom uses the camera's lens (optics) to magnify the view. When using only optical zoom, the camera will capture an image file containing 5MP of information. Because only the camera's lens is used to capture the full amount

of megapixels, your image will be sharper and smoother than with digital zoom.

Digital zoom, which you can usually turn on or off in the camera's setup menu, engages when you've zoomed in as far as you can with the optical zoom. When looking at the camera's LCD or through the viewfinder, it appears that the camera is zooming in even more, but in reality, the camera has simply enlarged part of the image and cropped the rest. By cropping the image, the camera has discarded some of the image's pixels, leaving you with an image that contains far fewer pixels than one shot with an optical zoom. For example, using our previous 5MP camera, we take a picture that engages digital zoom. The camera

croops out 2MP of image data so the image file now contains only 3MP of image data. Because we're using a 5MP camera, however, the camera must produce an image with 5MP of data. In order to do this, the camera interpolates (invents) the missing pixels and adds them to the image file. The resulting image is almost always softer than the original, and individual pixels may be visible when the picture is enlarged.

So, when you're shopping for a digital camera, ignore the digital zoom specifications. And, for the best image quality and ability to make larger prints, use only the optical zoom when shooting. **FG**

BY THEANO NIKITAS

Essential

THINGS TO KNOW

CAMERA BATTERIES

Q Which battery type do I need for my camera or camcorder?

A To see which type of battery your camera requires, check your users manual. Some cameras and camcorders can use AA NiMH (nickel-metal hydride) or Li-Ion (lithium-ion) batteries; others use special proprietary rechargeable battery packs. Some may have an internal battery that can be charged via USB or a wall outlet.

Q What is a proprietary battery?

A Proprietary batteries are made by a specific manufacturer to work exclusively with its products, making it easy to determine which kind of battery your camera uses.

Q Can I use regular alkaline batteries in my camera or camcorder?

A Many cameras are compatible with alkaline batteries, but you should check your camera's manual to be sure. If you use alkaline batteries in a higher-powered camera, you may only be able to snap a few shots before the batteries are used up, especially if you're using your camera's flash or camcorder's light.

Q What is the difference between NiMH and Li-Ion batteries?

A Both NiMH and Li-Ion batteries are highly efficient. Li-Ion batteries can provide power for longer periods of time. NiMH batteries are usually less expensive than Li-Ion batteries.

Q Can I use rechargeable NiMH batteries in my camera or camcorder?

A Many digital cameras can be powered with rechargeable NiMH batteries, which can be reused many times but require a special charger.

Q How do you recharge a rechargeable battery?

A There are battery bundles available that include a charger and two to four rechargeable batteries. When the batteries are low, simply place them in the charger and plug the charger into a wall outlet.

Q How long does it take to charge a rechargeable battery?

A Charge time depends on the type of charger you buy. Some chargers can have your batteries ready in as little as 15 minutes, though many chargers require four to six hours to fully charge your batteries.

Q What does a rechargeable battery's mAh rating mean?

A The mAh (milliampere-hour) rating indicates how much power the battery can hold and how long it will last before it needs to be recharged. The higher the mAh rating, the better.

Q Will I be able to use my rechargeable batteries forever?

A Rechargeable batteries offer a long life span of two to three years, but they won't work forever. On average, rechargeable batteries can be charged up to 1,000 times.

Q Should I purchase extra batteries for my camera or camcorder?

A Having extra batteries on hand is always a good idea. You can use one set of batteries while another is charging, or take two sets with you so you'll have double the battery power.



Which Point-&-Shoot Camera Is Best For You?

If you're a little confused about the most important features in a digital camera, you're not alone. In this chart, we compare features from select digital cameras, and we also explain what these features mean.

		Resolution; Optical zoom	Shutter speed	Memory card	LCD size	Battery life	ISO	Movie mode
	What It Means	More pixels mean bigger and clearer prints; Moves the lens closer to your subject	A faster shutter speed will let you snap action photos without blur	Removable card that stores your photos in your camera	The LCD is the screen on the back of the camera	Based on how many shots you can take on a single charge	A higher ISO lets you take better photos in low-light settings	Lets you record short video clips on your digital camera
	Insignia NS-DSC10B MSRP: \$89.99* SKU 9266992 <i>See p. 23</i>	10MP; 3X	1 to 1/2000 seconds	SD/SDHC	2.5 inches	N/A	Auto; Manual: 100, 400, 800	Yes
	Kodak EasyShare Z1485 MSRP: \$199.95* SKU 9285016	14MP; 5X	8 to 1/2000 seconds	SD/SDHC	2.5 inches	N/A	Auto; Manual: 100, 200, 400, 800, 1600	Yes
	Fujifilm J250 MSRP: \$199.99* SKU 9283223	10MP; 5X	1/4 to 1/2,000 seconds	SD/SDHC	3 inches	N/A	Auto; Manual: 64, 100, 200, 400, 800, 1600, 3200	Yes
	Samsung TL100 MSRP: \$229* SKU 9218713	12.2MP; 3X	N/A	SD/SDHC	2.7 inches	N/A	Auto; Manual: 80, 100, 200, 400, 800, 1600	Yes
	Nikon S60 MSRP: \$299.95* SKU 8975157	10MP; 5X	1/1,500 to 2 seconds	SD/SDHC	3.5 inches	140 shots	Auto; Manual: 64, 80, 100, 200, 400, 800, 1600, 3200	Yes
	Olympus Stylus Tough-6000 MSRP: \$299.99* SKU 9224118 <i>See p. 35</i>	10MP; 3.6X	1/4 to 1/2,000 seconds	xD-Picture Card/microSD	2.7 inches	230 shots	Auto; Manual: 50, 100, 200, 400, 800, 1600	Yes
	Sony T900 MSRP: \$379.99* SKU 9267036	12.1MP; 4X	2 to 1/1,000 seconds	Memory Stick Duo/MS PRO Duo	3.5 inches	N/A	Auto; Manual: 80, 100, 200, 400, 800, 1600, 3200	Yes
	Canon PowerShot SD970 IS MSRP: \$379.99* SKU 9276053	12.1MP; 5X	15 to 1/1,600 seconds	SD/SDHC/MMC/MMC Plus	3 inches	270 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600	Yes

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which D-SLR Is Best For You?

As D-SLR prices keep coming down, more photographers are turning to them, both as a first camera and as a trade-up to something better. In this chart, we'll help you sort through some of the features and performance specs from select D-SLR cameras.

		Resolution	LCD size	ISO range	Kit lens	Burst speed	Shutter speed
What It Means		Image sensor in megapixels; more means a bigger image	Diagonal measure of screen on back of camera	A higher ISO range will let you take better photos in low-light situations	Standard lens bundled with the camera body	Frames per second (fps) you can shoot while in burst mode	The wider the range, the greater the gamut of long exposures to frozen action
	Casio Exilim EX-FH20 MSRP: \$599.99* SKU 9051063	9.1MP	3 inches	100 to 1600	N/A (fixed lens equivalent to 26-520mm f/2.8-4.5)	40fps	1 to 1/2,000 seconds
	Nikon D5000 MSRP: \$729.95* SKU 9311755	12.3MP	2.7 inches	200 to 3200	18-55mm f/3.5-5.6G VR lens	4fps	30 to 1/4,000 seconds
	Canon EOS Rebel XSi MSRP: \$799.99* SKU 8794691	12.2MP	3 inches	100 to 1600	EF-S 18-55mm f/3.6-5.6 IS lens	3.5fps up to 53 shots	30 to 1/4,000 seconds
	Canon Rebel T1i MSRP: \$899.99* SKU 9318954	15.1MP	3 inches	100 to 3200	EF-S 18-55mm IS	3.4fps	30 to 1/4,000 seconds
	Pentax K200D MSRP: \$1,199.99* SKU 9217297	10.2MP	2.7 inches	100 to 1600	18-55mm lens	N/A	30 to 1/4,000 seconds
	Panasonic Lumix L10K MSRP: \$1,299.99* SKU 8815464	10.1MP	2.5 inches	100 to 1600	LEICA D VARIO-ELMAR 14-50mm f/3.8-5.6	3fps to card capacity	60 to 1/4,000 seconds
	Olympus E-3 MSRP: \$1,699* SKU 8682776	10.1MP	2.5 inches	100 to 3200	N/A (body only)	5fps to card capacity	60 to 1/8,000 seconds
	Nikon D700 MSRP: \$2,999.95* SKU 8928985	12.1MP	3 inches	200 to 6400	N/A (body only)	5fps	60 to 1/8,000 seconds

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which Digital Camcorder Is Best For You?

Digital camcorders come in a number of formats: DVD, hard drive, flash drive, MiniDV, and high definition are the most common. By comparing the following digital camcorders, you can determine which recording format and product best fit your style.

What It Means		LCD size	Optical zoom; Digital zoom	Recording speeds	Memory card	Digital still resolution	Lines of resolution
Flash Drive	 Samsung SC-MX20 MSRP: \$299* SKU 8907365	2.7 inches	34X; 1,200X	N/A	SD/SDHC	N/A	N/A
	 JVC GZ-MS120BU MSRP: \$299.99* SKU 9185829	2.7 inches	35X; 800X	N/A	SD/SDHC	N/A	N/A
	 Canon FS200 MSRP: \$329.99* SKU 9239549	2.7 inches	37X; 2,000X	N/A	SDHC	N/A	480
	 Samsung HMX-H106 MSRP: \$899.99* SKU 9340368	2.7 inches	10X; 100X	N/A	SDHC	2.2MP	1,080
	 Canon VIXIA HF S10 MSRP: \$1,299.99* SKU 9239521	2.7 inches	10X; 200X	FXP/LP/ MXP/SP/XP	SDHC	6MP	N/A
	 Sony HDR-XR100 MSRP: \$749.99* SKU 9178739	2.7 inches	10X; 120X	FG/HQ/SP/ LP	Memory Stick PRO Duo	4MP	1,080
Hard Drive	 Panasonic HDC-HS250K MSRP: \$899.95* SKU 9206995	2.7 inches	12X; 700X	HA/HG/HX/ HE	SD/SDHC	10.6MP	1,080
	 Sony HDR-XR500V MSRP: \$1,299* SKU 9178418	3.2 inches	12X; 150X	FH/HQ/SP/ LP	Memory Stick PRO Duo	12MP	N/A

*Prices listed in this issue are for general reference and may vary from retailer pricing.

OLYMPUS®

Digital Camera Are You Tough Enough?



Olympus STYLUS TOUGH-6000

MSRP: \$299.99

SKU: 9224118 (orange)

9225395 (blue)

9225386 (white)

9225368 (yellow)

www.getolympus.com

DIGITAL IMAGING

Quick Overview

Olympus' STYLUS TOUGH-6000 just might be the ultimate in affordable outdoor cameras. Not just waterproof but also shockproof and freeze-proof, the 10-megapixel STYLUS TOUGH-6000 will be there when you need it. It can automatically stitch together a panoramic image—simply turn as you hold down the shutter button. The STYLUS TOUGH-6000 comes in a Best Buy-exclusive orange hue, which makes it easy to find should you drop it in the underbrush.

Perfect For

Outdoor enthusiasts who enjoy hiking, hunting, ice fishing, ice hockey, sledding, and boating.

Outstanding Benefits

- Shockproof to 5 feet
- Freezeproof to 14 degrees Fahrenheit
- Waterproof down to 10 feet
- 10 megapixels
- 3.6X wide-angle optical zoom
- Huge 2.7-inch LCD
- Dual image stabilization and face detection assure you of amazing shots, time after time
- Capture videos underwater or on the way down a luge track
- 42MB internal memory expandable to 2GB with an xD-Picture Card

Coollest Feature

You can control the camera even with gloves on by tapping different areas on the top, back, and sides of the camera.

Z Perfect Fit

Digital Cameras Created With You In Mind

DIGITAL IMAGING



Too many cameras these days try to be all things to all people. In contrast, Fujifilm has taken a different tack by choosing to focus on one distinct group out there—the Life Enthusiast™.

Sure, you could say everyone's enthusiastic about life, but these people are different. You may even be one of them. So ask yourself: Do you have a passion for life and capturing every moment? Are you sure-minded, confident and decisive to boot? And lastly, do you harbor the unshakeable belief that each and every picture you take matters somehow in telling the story of your life? Well, if you answered yes, yes, yes, and absolutely, yes—you are a Life Enthusiast™.

Fujifilm built the Z30 and Z33WP digital cameras specifically for two types of Life Enthusiasts™. If you're a fashionably hip Gen Y'er or active family adventurer, these two digital cameras are your perfect fit.

Fashion-focused hipsters, meet the Z30.

It's the camera that morphs fashion with technology just the way you like it.

Match your car color or your personality with a Z30. It comes in pink, black, orange, and a Whirl White design, exclusively at Best Buy.

Just like you, sharing is top of mind with the Z30. It gives you core specs of 10MP, 3x Optical Zoom, Face Detection technology, and Picture Stabilization—for images that are a joy to share.

Blog Mode allows you to easily upload photos to your favorite social networking sites—making it the essential party camera. Couple and Group Timer Modes allow you take great shots of your friends with YOU in them. If you're a Gen Y'er, the Z30 is truly your perfect fit.

Active families, your waterproof Z33WP awaits.

Fujifilm clearly knows what extreme parents need most. The Z33WP is waterproof to 10 ft. as well as sand-proof, mud-proof and practically kid-proof (be realistic).

This digital camera allows you and yours to dive into life and adventure without hesitation.

You'll find it fits your active family like a glove. The smooth grip and shape means it won't slip out of your hands when you need it most. And it gives you big, rubbery buttons that are easy to use whether you're shooting the rapids, a rainy day at the kids' ballgame or lounging at the beach.

This is a camera designed to help you hold onto every surf-soaked, sand-crusted, fun-filled image of your vacation—and your kids. For families who love the great outdoors, this camera can withstand the elements. And with the choice of colors—green, black, pink or blue, a Best Buy exclusive color, it'll look good doing it.

It's no accident if it seems like your Fujifilm digital camera was built just for you. The company prides itself on engineering digital imaging devices that are woven into the lifestyles of its very select consumers. It all starts with having a clear picture of who that consumer is. And with the undying belief that Every Picture Matters™. **FG**

Which Fujifilm Digital Camera Fits Your Lifestyle?

FUJIFILM

We realize people live their lives differently and have different needs for how they capture and share their images. The FinePix line of digital cameras from Fujifilm has a camera for everyone, including the basic and trend-savvy user, the active family, and the image enthusiast, to insure they never miss a photo opportunity.

Product Name SKU	FINEPIX J20 9245177	FINEPIX J250 9283223	FINEPIX Z30 9245186	FINEPIX Z33WP 9223761	FINEPIX F200EXR 9312291	FINEPIX S1500 9283214
						
MSRP	\$129.99*	\$199.99*	\$149.99*	\$179.99*	\$379.99*	\$229.99*
Megapixel	10MP	10MP	10MP	10MP	12MP	10MP
Optical Zoom	3X	5X wide	3X	3X	5X wide	12X
LCD	2.7 inches	3 inches	2.7 inches	2.7 inches	3 inches	2.7 inches
Waterproof	No	No	No	Yes, up to 10 feet	No	No
Face Detection with Auto Red- eye Removal	Yes	Yes	Yes	Yes	Yes	Yes
Stabilization	Picture stabilization	Dual Image Stabilization	Picture stabilization	Picture stabilization	Dual Image Stabilization	Dual Image Stabilization
Automatic Scene Recognition Mode	SR AUTO - detects 6 scenes	SR AUTO - detects 6 scenes	SR AUTO - detects 6 scenes	SR AUTO - detects 6 scenes	EXR AUTO (6 scenes and 3 sensor modes)	SR AUTO - detects 6 scenes
Other Notable Features	- Record movies with sound at 30fps - Only 17.4mm thick 16 pre-programmed shooting modes - In-camera image trimming	- Mode dial for fast, easy mode selection - Up to ISO 3200 maximum 21 shooting modes	- One Touch movie mode - Dual Blog mode - Successive Movie mode	- One Touch movie with sound - Sand- proof - Mud-proof - World's Smallest Water-proof Digital Camera	- HD still photo capable - Dynamic Range 100 to 800% - Up to ISO12800 maximum	- Panoramic mode - Continuous tracking auto focus - Full manual control
Perfect For	Those looking for ease of use, compact style with solid features at a value price.	The ease-of-use shutterbug who needs more zoom and an extra-large screen	For the trend-savvy user who wants to look good while taking great pictures	The active family or individual who wants a camera to use anywhere, anytime, in any condition ... even 10ft. underwater	For those looking for extreme image quality and low-light shooting capabilities	Those needing long zoom ability without having to change lenses

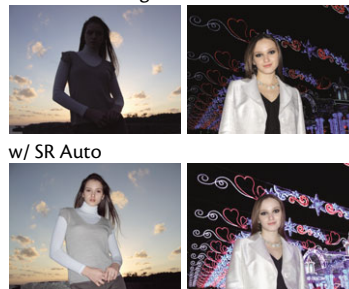
* Prices listed in this issue are for general reference and may vary from retailer pricing.  Available in store and at Bestbuy.com  Available at Bestbuy.com only

Picture Stabilization Mode/Anti-blur Mode



Picture Stabilization Mode/Anti-blur Mode automatically corrects for camera shake and subject blur, helping you to capture fleeting moments in crisp stop-action with background detail intact.

Conventional digital



SR Auto Knows What's Best

Framed scenes are automatically detected and selected into appropriate camera settings: Portrait, Landscape, Night, Macro, Night Portrait, and Backlit Portrait to intelligently optimize camera settings under even the more difficult shooting conditions.

FirstGlimpse

DIGITAL IMAGING

Accessories & Services

Prices for digital camcorders and cameras continue to fall as video and picture quality improve, which is especially good news for first-time buyers or those looking to upgrade. Pairing

your new camcorder or camera with the right products will bring you better photography results. Here are some must-have accessories you should consider to get the most out of your digital imaging device. **FG**

UV FILTER

- Protect digital camcorder and D-SLR lenses from dust, dirt, fingerprints, and scratches
- Get clearer, more detailed videos or photographs in bright conditions

TRIPOD

- Larger tripods can serve as an easy way to ensure steady video footage
- Pan large areas while recording video in one smooth motion
- With a tripod and a timer, you can get a picture of the entire group without someone needing to man the camera
- Steady your hand for close-up or distance shots to avoid photo blurring

SPARE BATTERIES/CHARGER

- Be sure you're never caught without the power to capture the perfect moment
- Whether your camera uses proprietary batteries or AAs, keep at least one fully charged spare or set in your camera bag
- An additional battery charger will give you the flexibility to power up your camera batteries anywhere you're headed, even if you're traveling

EXTRA MEDIA

- Keep spare memory cards on hand so you can snap away without having to worry about running out of storage space
- Consider having several smaller media cards instead of one larger card; if something goes wrong with one, you'll still have a backup
- For your digital camcorder, keep more recording media in your bag than you think you'll need, just in case

ADDITIONAL LENSES/CONVERTER LENSES

- Extra lenses for D-SLRs and converter lenses for digital camcorders can enhance your results by extending your field of view, reducing glare, and more
- Telephoto lenses enable you to zoom in from far away; wide-angle lenses give you the ability to get a full view even if you're close to the subject; and macro lenses will let you achieve up-close, detailed shots of your photo subject

EXTERNAL FLASH

- Light up your subjects from greater distances
- Offer better control of lighting conditions when shooting by directing the angle of the flash

REMOTE SWITCH

- Take pictures without having to touch the camera, which can reduce camera shake
- Longer cable lets you snap shots without being tied to the camera
- May enable the user to lock the shutter for longer exposure times

DIGITAL IMAGING SERVICES

Once you've set your sights on the camera or camcorder you want, consider taking advantage of the digital imaging services offered by your local CE retailer. Not only can you protect your imaging investment, but you can also discover photography and videography skills to make your photos and videos picture-perfect.

- D-SLR Or Camcorder Service Plan
- D-SLR Training Course
- Camcorder Training Course



Going Wireless

Unwire, Unwind & Uncomplicate



s wireless devices continue to evolve and include more and more enticing features, the opportunities for using them in new ways are multiplying. Combine that with ever-growing service provider networks and impending 4G network rollouts, and you have a plethora of wireless options that you may have never before considered.

Wireless technology is a powerful way to make your life more connected and more convenient. Say good-bye to wires and hello to an untethered lifestyle.

Wireless technology is a powerful way to make your life more connected and more convenient. Say good-bye to wires and hello to an untethered lifestyle.

Display Your Favorite Photos

We all have hundreds of favorite photos we like to look at to remind us of good times and loved ones. But there are a couple of issues we all face. One is that we don't have enough wall space to hang up all the photos we want to display. Another is that we all

have plenty of photos that aren't necessarily frame-worthy but shouldn't be tucked away in a photo album to be viewed once a year, either.

Digital photo frames are ideal for this type of scenario. You load a USB flash drive or memory card with hundreds of photos, connect it to a digital photo frame, and let the album cycle all day and night. And some models contain Wi-Fi, so you can also stream photos to the device wirelessly from your PC or an online photo-sharing site by connecting it to your home network.

Stay Connected On Vacation

Every tech-friendly family has faced this dilemma: When you're on vacation, you still want or need some Internet access. Whether you want to email your folks and let them know what you're up to that day, update your travel blog, or get directions to a famous eatery, being able to jump online in a flash is desirable indeed.

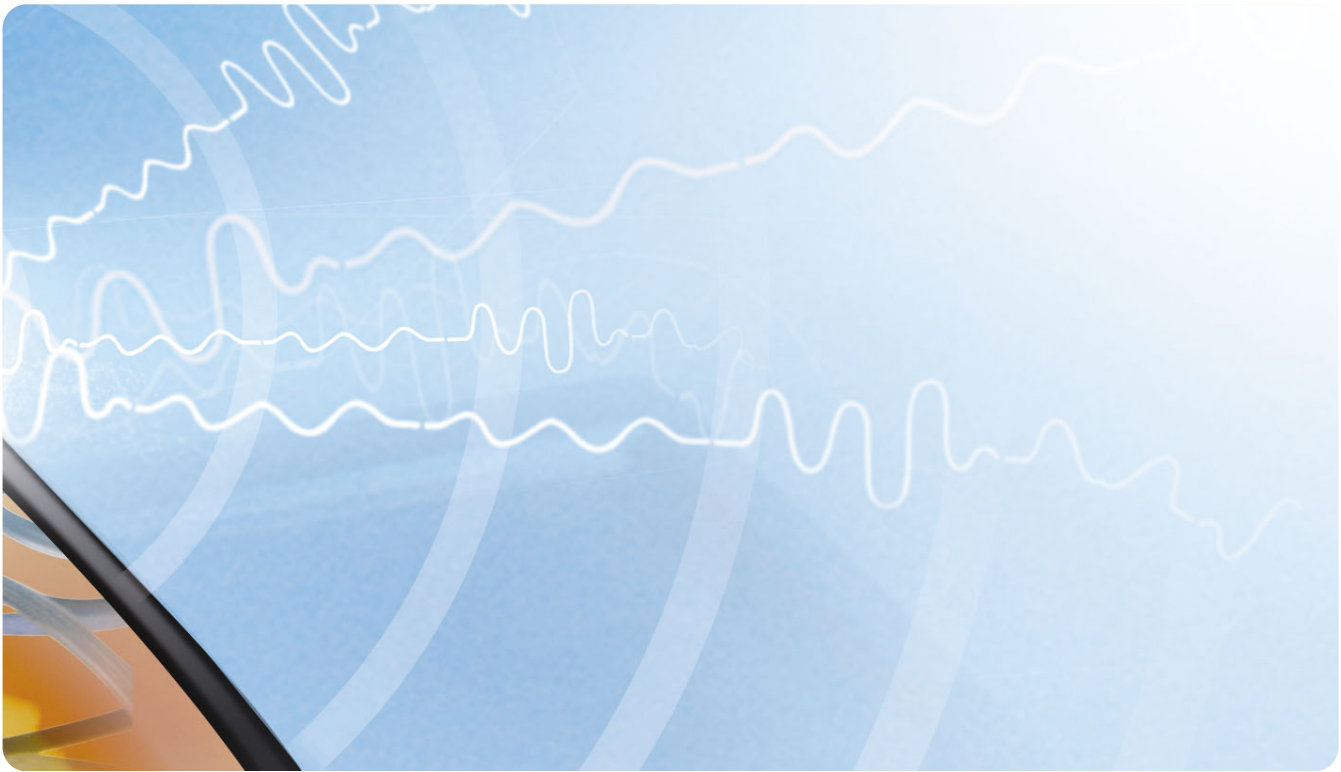
Many hotels offer in-room or lobby Internet access, but what if you're in the car? Or perhaps you're at the beach, or the woods, or a relative's house where there is no Internet access: The answer is a wireless broadband card.

If you need Internet access, just plug the wireless broadband card into your laptop's PCMCIA slot and connect to a cellular network. You can roam with a broadband card, so your spouse can even check his email in the passenger seat while you drive.

Game Central

You know how it goes: You're destroying some aliens with your friends on your gaming console, and you get to joking around. Somebody quotes a movie, and before long, everybody's laughing and swapping good ones.

After the last of the aliens is destroyed, you are all in the mood for a good flick. Rather than sending somebody out to the video store, you can just



jump on the Internet right from your gaming console and stream a movie from Netflix (www.netflix.com). Afterward, your hangout time with your friends can also transition seamlessly from gaming to movies to looking up the latest funny viral videos online, all without having to get off of the couch.

Music In The House

You're a music nut equipped with an MP3 player with massive storage and a PC on which you've stored your entire music library. But when you're in the house doing chores, relaxing, or hosting a party, you want to crank out the jams in virtually every room in the house.

What you need is a whole-house audio system with wireless speakers that produce high-quality audio wherever you are in your home and are tucked away discreetly in corners. You can connect your PC with all your music to a receiver and select tunes with a universal remote

control or connect your MP3 player to the sound system and enjoy your favorite playlists. The kicker is that with wireless speakers, you won't have to worry about routing speaker cables all over the walls and ceiling.

Drive Safely

The car is not a place for distractions, and juggling a cell phone handset and a steering wheel isn't high on the list of safe driving procedures. In fact, a few states have laws prohibiting handset use while driving; others ban handsets for young drivers. To circumvent this problem, a hands-free setup is the way to go.

For personal use, a Bluetooth headset is perfect, but if you have young drivers who use the car, as well, you can step up to a car speakerphone. A speakerphone usually attaches to the car's sun visor and is equipped with a speaker and a microphone, so you can hear and be heard when having a conversation in the car. Your Bluetooth-

capable phone will connect to the speakerphone for quick and easy calls. Some devices support multiple phones, so everyone in the family can make use of the same speakerphone, no matter who's driving.

Be Creative

Wireless technologies such as Bluetooth, Wi-Fi, and cellular service have been standardized for optimum operability, so you can rest assured that your devices will speak the same language. Because just about any consumer electronics device you buy these days, including digital cameras, HDTVs, and GPS units, is equipped with one or more wireless capabilities, the extent to which you unwire your life is virtually limited only by your own creativity.

Take advantage of wireless technology and take it easy. **PG**

BY SETH COLANER

Wireless Gaming Here, There & Everywhere

Connected Game Consoles & Portable Gaming Systems



The capabilities of gaming devices have advanced significantly over the years. Now, you can game wirelessly in your home with Wi-Fi connected consoles or away from home via Wi-Fi connected portable gaming consoles.

Games, Groups & More

The latest portable gaming consoles provide access to online gaming demos and let you purchase and play new games with other gamers using the same type of portable console as long as you have a reliable Wi-Fi connection. An online gaming store can provide free game demos and trailer previews for soon-to-be released games. It's easy to purchase a game when all you have to do is select it from numerous options in the online game store via your portable gaming device.

Other features on gaming portables let you host or join a gaming session with multiple players when you access a nearby Wi-Fi connection. Or, you can take advantage of downloading stations at certain CE retailers: Simply look for an

in-store compatible station that gives you wireless access to more gaming demos and other media.

Multimedia Mania

In addition to these gaming options, some portable game consoles support movies, Internet radio, saved audio files, photos, digital videos, TV shows, and recorded content from your DVR or DVDs. You can stream radio stations

through any Wi-Fi hotspot and stream thousands of Web stations or RSS channels. Your portable gaming console can function as a media extender when you download and transfer movies and TV programming from a compatible video service to your gaming system.

In-home networked gaming consoles are an ideal complement to a home-theater system. With your console wirelessly connected to the Internet 24/7, you'll be able to receive automatic game updates. If you've set up your wireless console to a home-theater PC, you can use it to stream media (MP3s, photos, and videos) from the entertainment PC to the console. Another benefit of a wireless connection is access to media-streaming services that allow you to use the Internet to instantly watch movies and TV episodes streamed from the game console to your TV.

Now that we've opened your eyes to all that gaming consoles have to offer, you can make the purchasing decision that's ideal for your lifestyle. **FG**

BY JOANNA SAFFORD

Messaging & Video Chat

Don't overlook the communication tools available on portable gaming consoles, especially if you like to text or talk on the go. With a headset, a remote, and a Wi-Fi connection, you can make video calls, via Skype or another VoIP service, to other consoles, mobile phones, or landlines. Other consoles support picture-based text messaging, which enables you to send a drawing to friends with the same type of console. ●

Notebooks On The Loose

Wonderfully Wireless

In times past, buying a notebook instead of a desktop PC was a decision made primarily for the convenience of being able to work on your projects and files without being tied to your desk at home. And as notebooks became more and more powerful, many people came to see them as desktop replacements.

These days, notebooks meet a wide swath of computing needs, and their value extends far beyond simply being able to work on projects away from home to powerful wireless capabilities. Whatever type of notebook you choose, consider the freedom afforded you by Wi-Fi and broadband air cards, the two wireless options for notebooks.

Wi-Fi

Of the two wireless technologies, Wi-Fi is probably the more familiar. You'd be hard-pressed to find any new notebook without built-in Wi-Fi anymore. (It will be in the computer's specifications as 802.11a/b/g/n, or some combination thereof.) Wi-Fi offers a fast wireless Internet connection for anyone using a notebook in range of a Wi-Fi hotspot, which usually reaches a diameter of a few hundred feet. Hotspots are increasingly ubiquitous, not only in people's homes as private home networks but also in eateries, retail stores, hotels, and even some municipalities.

Perfect for: Anyone who prefers a coffee shop or library to the office. Home users can take advantage of their own private



home networks, and mobile travelers can take advantage of Wi-Fi hotspots at airports and hotels, too.

Broadband Air Cards

With a broadband air card, you can connect to the Internet at virtually any time, regardless of where you are located. This is because rather than relying on Wi-Fi hotspots with a range of a few hundred feet, broadband air cards leverage the 3G networks of cellular companies, which have large service coverage areas.

For example, if you buy a broadband air card designed to work with a specific carrier's network and purchase a service plan, you can access the Internet wherever that carrier provides

coverage—just as you can with your mobile phone. If you're in an area that doesn't yet receive 3G coverage, you can still connect via cell phone towers for a slower generation of your carrier's network.

Basically, with a broadband air card, you can connect to the Internet anywhere you can receive a cell phone signal. Just pop the card into the PCMCIA slot on your notebook, and away you go.

Perfect for: Anyone who needs Internet on the go. You can even roam with a broadband air card, so you can get Internet access in the car (if you're a passenger) or in rural areas where hotspots are few and far between. **FG**

BY SETH COLANER

A Notebook Alternative

Certainly, many folks like the ability to have a powerful computer they can take anywhere, while others have gone in a different direction and invested in netbooks. Netbooks are incredibly inexpensive, and although they generally have less powerful features than a larger and more expensive notebook, they're optimized for portability while taking advantage of wireless technology. Netbooks all have built-in Wi-Fi, and some also are equipped with built-in 3G capabilities—like those you get with a broadband card. ●

FirstGlimpse

Transmit Audio Wirelessly

Free Your Audio System & Speakers From Cable

FEATURE

Moving audio from your office to the living room is easier than you think. The traditional method is a bit archaic in an age of new technology innovations; a better approach is to use wireless audio systems, such as digital media adapters and whole-house audio systems, that connect to a router and wireless speakers. As we'll see, both free your entertainment and make it more accessible.

Wireless Digital Media Adapters

A wireless media adapter allows you to stream music from one room, such as from the office where you keep your computer, to the living room, where you want to relax and enjoy the music. To use a wireless digital media adapter, you'll need a few accessories, such as a router that wirelessly transmits the signal and a base unit that connects to your router. Then, in order to stream audio to other devices in your home, such as an A/V receiver in your home theater or an HDTV in your bedroom, you install a receiver unit to your compatible electronics. These "satellite" receivers connect to your wireless router over Wi-Fi and to access audio files on your PC. Audio does not actually use much bandwidth over your home Wi-Fi network, but you should probably place the satellites within 200 feet of the router for the best audio quality. A software program on your PC will allow you to share music



Wireless Speakers

Instead of a digital media adapter, another way to move your music without wires is to use wireless speakers. The only difference between regular speakers and wireless models is how you connect them. Generally, wireless speakers are designed to work with Bluetooth or a 2.4GHz signal. (Many wireless speakers use a proprietary 2.4GHz signal that is not the same as Wi-Fi—it is more like the wireless signal baby monitors use.) In most cases, you will use speaker wire for front and center speakers and connect them to your A/V receiver. Your rear speakers will be wireless, and they include a transmitter that connects to your A/V receiver wirelessly.

This means you can position the rear speakers anywhere you want and move them around at will. For example, for a frenetic action movie, you might want them on both sides of the couch, but for a more subtle romantic comedy—where the surround sound is often just a rock ballad on all speakers—you might move them farther away. With a wireless speaker setup, you'll have a lot less clutter around your entertainment center and the A/V receiver itself. ●

between your PC's hard drive and the audio devices that have receiver units.

Whole-House Audio Systems

A whole-house audio system, such as the Sonos Multi-Room Music System (prices vary; www.sonos.com), includes a base station, which connects to your router, and satellite receivers for listening to music in any room. The receivers come with their own speakers, but you can also connect them to your own stereo or HDTV. A whole-house audio system with included speakers is a great option if you want to play a different tune in each room of your house. For example, you might decide to stream jazz to the living room while your teenage daughter listens to alternative rock in her bedroom. You can also link each satellite unit to play the same music.

What It All Means

Wireless audio gives you more flexibility to play your audio anywhere in the home, without being limited to where the cables end up. It also means you'll no longer be limited to listening to your PC's tunes wherever your computer is set up. **EG**

BY JOHN BRANDON

Wireless Routers 101

What You Need To Know Before You Make A Purchase

Implementing a wireless home network lets you surf the Web from anywhere in your home using a notebook, a netbook, a smartphone, or any other wirelessly connected device. The ins and outs of purchasing a wireless router for your home network can leave you perplexed, but understanding your options will lead to success in finding the perfect wireless router for your needs.

The ABCs Of Wireless Standards

Four wireless standards can be found on wireless routers: 802.11a, 802.11b, 802.11g, and 802.11 Draft N. One of the earlier standards, 802.11a has a quick transfer rate (54Mbps) on the 5GHz frequency band (which doesn't compete with household appliances), but it offers a limited range, and it's now only offered on older devices. The 802.11b standard is still supported by some devices, but its transfer rate (11Mbps) is slower than 802.11g (54Mbps), which is the quickest standard to be fully approved by the IEEE (Institute of Electrical and Electronic Engineers), an international nonprofit organization that sets wireless standards.

Although 802.11 Draft N hasn't been fully approved by the IEEE, it is offered on many wireless routers, and it offers a quick throughput (up to 300Mbps) and a wider range of coverage than 802.11a/b/g. While 802.11a operates on the 5GHz spectrum, 802.11b and g run

on the 2.4GHz spectrum. Another area 802.11 Draft N outperforms 802.11a/b/g standards is its dual-band compatibility, which allows it to switch between 5GHz and 2.4GHz in order to always be operating with maximum signal strength and avoiding interference.

Fast wireless standards, such as 802.11g and 802.11 Draft N, are ideal for streaming music and movies or for online gaming. The speed of these standards also helps shorten download times. Both 802.11g and 802.11 Draft N can use MIMO (Multiple Input/Multiple Output) technology, which utilizes multiple antennas to enhance range and performance. This allows you to enjoy quicker wireless speeds at a greater



distance from your wireless router than 802.11a/b provide.

Most wireless routers are backward-compatible, meaning they can support older wireless standards. This means a wireless router capable of supporting 802.11 Draft N speeds will be compatible with 802.11a/b/g devices and other Wi-Fi peripherals.

Stay Safe

The security features of your wireless router are also important. WPA (Wi-Fi Protected Access), which encrypts data from your computer and implements user authentication, is the strongest and most common encryption configuration in wireless routers. Firewalls block unauthorized users from accessing a network, therefore blocking cyber criminals from getting to your data. And finally, some networks come with parental controls that block access to certain Web sites (either by URL or keywords). Wireless routers all come with an assortment of these types of security features, so you can choose the best combination for your family.

Finding the perfect router is founded on choosing one that's quick enough to handle your typical online activities and has the appropriate level of security to keep your personal information safe. **FG**

BY TESSA WARNER BRENNEMAN

Faster Than Wireless

When you purchase a wireless router, be sure it has extra Ethernet ports that support Gigabit Ethernet, which is the fastest Ethernet standard available. Wired Gigabit Ethernet speeds are even greater than the fastest wireless standard, 802.11 Draft N. Having multiple Ethernet ports will allow you to make a wired connection to devices in addition to wireless connections. If you want to connect a wired network device (one that doesn't include built-in wireless capabilities) to your home network, an Ethernet port and an Ethernet cable will ensure you can still integrate it into your network. ●

FirstGlimpse

Unleash Your Digital Memories

Use Your Wireless Network To Share Photos

You spend a lot of time with your digital camera, capturing unforgettable shots. But your photos and videos can't be revisited and enjoyed if they're stashed away on a memory card or hard drive. As such, there are several wireless digital-imaging products that make it easier to upload and share your favorite moments.

Transfer Photos Wirelessly

Take, for instance, wireless memory cards, such as the Eye-Fi Share Video (\$79.99; www.eye.fi). These work like regular memory cards, but you can transfer pictures and video files over your wireless home network from the card to your computer. There's no need to use a memory card reader or cable connection between your camera and PC. Eye-Fi also offers cards that can upload your pictures and videos directly to your favorite photo- and video-sharing sites when you're within any Wi-Fi network's range, which is perfect for when you're on vacation and want to share your experiences right away.

Display Photos Wirelessly

Once you've transferred your photos and videos to your computer, it's time to show them off. Paired with a wireless home network, a wireless digital photo frame, such as Kodak's EasyShare 8-inch Wireless Digital Photo Frame (\$199.95; www.kodak.com), can access the photos



stored on your computer and display them as a slideshow. If you have a large photo collection, a wireless frame makes showcasing your pictures easier than on a wired frame, because you don't have to spend time transferring your favorites to a memory card or flash drive that must then be plugged into the frame. And because they are transferred wirelessly from your computer, the number of pictures you can display is unlimited,

because you can share the photos you have stored on your computer or your online photo-sharing site account.

Print Photos Wirelessly

Chances are you'll want to make prints of your photos to display or to give as gifts. A wireless printer lets you print your best shots when it's convenient, without having to make a trip to the store to print or pick up your pictures. Because wireless printers can be shared over your wireless home network, everyone can print their favorite pictures from their own computer, even if your computer is in the office and the kids' computer is in the den. Plus, the printer can be placed anywhere in your home because there is no cable connecting it to a single computer.

Don't let your best pictures and videos get buried on your hard drive when so many wireless digital-imaging products make it easy to transfer, upload, print, and share them. **FG**

BY KRIS GLASER

Mobile Memories

A mobile phone with a built-in digital camera can come in handy when you leave your digicam or camcorder at home. No matter where you are, you can snap and share memories instantly via SMS (short message service). If your camera phone has Internet connectivity, you can even share your photos and videos through email. And now that mobile phones are featuring cameras with up to seven megapixels, you can capture sharp pictures on the fly. ●

Put Your PC (& The Internet) On The Big Screen

Stream Multimedia To Your HDTV



Computers are so good at storing and playing multimedia and streaming it from the Web (see the “What Can I Stream?” sidebar) that it’s a shame they are typically relegated to the den and connected to a small monitor and a set of tinny speakers. Wouldn’t it be nice if you could bring all of that multimedia prowess into your living room and enjoy it on your big HDTV and surround-sound setup? Well, with a home network, the right hardware, and a little bit of know-how, you can.

Start With The Network

Very few of the things we are about to discuss work without a home network, so your first order of business is purchasing a wireless router that lets all of your equipment share data and a single Internet connection. For best results, get a router that supports 802.11g, 802.11a, and 802.11n (often called Wireless N, Dual-N Band, or similar) to achieve maximum compatibility and streaming performance. Using 802.11n is ideal if you want to stream high-definition video, but be sure to use 802.11n networking products that are all from the same company to guarantee compatibility. Broadband Internet access is also a must



so you can stream high-quality video from the Internet without interruption.

From The PC To The HDTV

If you want to access content that is stored on your PC from your home theater, a media extender is a good fit. These come as standalone devices and are also integrated into some video-game consoles. They don’t have any internal storage space but stream multimedia over a home network directly from a PC. All media extenders use their own proprietary interfaces for accessing multimedia content, but most are so streamlined that

they are easy to use. Setting up a media extender is usually easy. You install software on your PC, turn on the media extender so the PC detects it, and then use the remote control that came with the media extender to navigate video, pictures, and music that is streamed over your home network from the PC.

Some devices, such as the Iogear Wireless USB to VGA Adapter Kit (\$349.95; www.iogear.com), project exactly what is displayed on your computer’s screen on your HDTV instead of using their own special interface. This lets you use your HDTV as though it’s a computer monitor



without having to string any wires to connect the two. You can watch DVDs or browse the Web just as though you were sitting at your computer, only you're doing it from the couch. To use the logear Adapter Kit, you need an HDTV with a VGA input (it should be labeled in the TV's manual). Setup is simple—plug

on all the time to access content using a media extender, there's an alternative. Media hubs are devices with integrated storage for holding movies, music, and other multimedia, and it is all managed from your PC and is accessible from a home theater. You can use a media extender to connect to it and stream

the logear adapter into a USB port on your PC, plug a VGA adapter into the back of your HDTV, and switch the HDTV to the VGA input. Now whatever is displayed on your computer monitor is also displayed on your HDTV, and you can use the video, picture, and music playback software installed on your computer to control it all from the living room.

If you don't want to have to leave your computer

multimedia over your home network. Video—particularly high-definition—requires a lot of storage space, so be sure to buy a media hub with at least 500GB of built-in storage. Ideally, it should also have expansion slots or ports so you can add extra storage later, if necessary.

Forget The Box

When shopping for home-theater equipment, be on the lookout for HDTVs that have PC multimedia streaming capabilities built in, eliminating the need to hook up any separate equipment to process the stream and pass it along to the television. HDTVs with integrated streaming also let you mount the set on the wall without needing to worry about hiding an extra cable, so they are a great way of keeping your home entertainment center looking tidy without sacrificing the benefits of multimedia streaming. **PG**

BY TRACY BAKER

What Can I Stream?

Aside from music, movies, and videos stored on your PC, you can stream the Internet's vast collection of multimedia over your wireless network to enjoy in your home theater. Use the setup outlined above to access the following sites from your couch.

Audio

Last.fm

www.last.fm

This is perhaps the most full-featured streaming audio and video site on the Internet. It lets you search for specific tunes you like, or you can type an artist or genre into the Radio panel to create your own custom station that plays that type of music.

Pandora

www.pandora.com

This is a great free service that lets you search for a song title or artist to create a radio station based on its musical details. You can individually rate songs to fine-tune each of your custom stations. It's also a terrific way to discover new bands that match your music taste.

Video

YouTube

www.youtube.com

YouTube is the most popular video site on the Internet, for good reason. Users have submitted clips covering nearly every topic imaginable, and you can surf the site for months and never see the same thing twice.

Hulu

www.hulu.com

This is one of the few video-streaming services offering legitimate versions of copyrighted programming from the major networks at no charge, including popular shows such as "Family Guy," "The Office," and "Heroes."

Netflix

www.netflix.com

Netflix's Watch Instantly video-streaming service (available only to subscribers) puts thousands of movies and TV shows on tap. You can watch as many of them as you wish each month, and new content is added all of the time. ●

On-The-Go Wireless

Cut Loose & Cut The Cords

By now, it's clear that wireless technology enables us to enjoy mobile entertainment, communication almost anywhere, and an unlimited supply of information. Different wireless gadgets offer unique benefits for innumerable lifestyles. Take a closer look to see which type of wireless device will give you more freedom from cables and cords that can limit your independence.

Hands-Free Gadgets

Mobile Bluetooth-enabled headsets are becoming increasingly common—this popularity surge could be attributed to the enforcement of hands-free driving laws in some states throughout the country. The right Bluetooth headset is designed with performance and convenience in mind. Some headsets feature automatic Bluetooth pairing with your mobile phone. For instance, the Jabra BT2070 (\$29.99; www.jabra.com) features three buttons, one of which will automatically pair the headset to your phone. In terms of ear comfort, look for a headset that is ergonomically proportioned for any ear and includes customized earbud sizes and removable earhooks.

To protect you and your passengers while commuting through clogged traffic, consider purchasing a Bluetooth-enabled hands-free car kit. Most kits are compact and can easily clip onto the car's sun visor. Using the Bluetooth speakerphone option on some hands-free kits, you can make calls via voice commands and hear your friend on the other line through your vehicle's speaker system. You can also stream music to



the car stereo if you use a car kit with an FM transmitter, which will let you play music from a compatible Bluetooth-enabled MP3 player or mobile device.

MP3 Players

If you're stranded in the airport with a long layover looming, an MP3 player full of your favorite tunes and videos will surely help pass the time quickly. Depending on the size of your media collection, you'll want to invest in an MP3 player that can store your current music

and video files yet still gives you enough space to expand it. Be sure to also take file format support, file download compatibility, and battery life into account when you're shopping for an MP3 player.

Wherever You Please

With so many wireless gadgets available for different lifestyles, there's no reason to leave your home, car, or office without one. **FG**

BY JOANNA SAFFORD

GPS Devices

A personal navigation device is a wireless companion that complements multiple lifestyles and activities. An in-car GPS device provides on-the-road directions for both family vacations and short in-town stops. Hikers, bikers, and outdoor adventurers will appreciate the capabilities of a handheld GPS device: They're best for locating natural landmarks and points of interest. If you enjoy working out at a local park, try a fitness GPS device. Additionally, there are GPS devices engineered for boating, golf, and motorcycle enthusiasts. ●

Epson Stylus NX515 All-In-One Printer

Smart, Simple & Affordable All-In-One



Epson Stylus NX515
Color Ink Jet
All-in-One
\$149.99
www.epson.com

Epson has combined printing, copying, and scanning capabilities into a single wireless printer to provide you with the customized results you want.

The Epson Stylus NX515 (\$149.99; www.epson.com) offers maximum efficiency with print speeds up to two times faster than similarly priced all-in-one printer models. The Epson NX515 produces crisp documents for everyday printing and enhanced photos for personal projects. If you're scrapbooking your latest vacation, the Epson NX515 is the ideal craft-making tool for scanning items from a vacation for a digital scrapbooking layout and printing high-quality images with vivid colors.

What's more, Epson provides budget-friendly ink in individual cartridge sizes for your personal printing needs. The Epson NX515 uses DURABrite Ultra pigment ink, which instantly dries, and only one set of cartridges is required to print both photos and documents. To preserve your memories, the Epson NX515 produces water- and smudge-resistant prints

that will prevent fingerprints when you pass your photo collection around a group of good friends and keep moisture from ruining your prints while in storage.

The Wireless Way

Want to give your student an academic tool that can maximize time while they're away at college? The Epson NX515 is designed for all the multitasking a college student must undertake. Because it offers built-in Wi-Fi and Ethernet

connectivity, the Epson NX515 can connect to multiple PCs to print, scan, and wirelessly access memory cards inserted in the printer as well as all computers your student and roommate have in their dorm room. With the Epson NX515 all-in-one's memory card support, your student will be able to print lab-quality borderless photos without using a PC. And your college student won't have to waste time accessing her PC to copy reports or research either, as the Epson NX515 can reduce and enlarge documents from 25 to 400% or make multiple copies with the touch of a button.

Automatic Photo Correction & Imaging Enhancement

The Epson Stylus NX515 includes Auto Photo Correction that will improve poor lighting in photos you've taken in dimly lit environments, such as a restaurant, concert, or campfire. Other corrective tools include red-eye removal, face detection, and photo restoration, all possible with the touch of just one button. ●

Eco-Benefits

Epson follows a progressive environmental policy, which is why the Epson NX515 and Epson ink cartridges are designed to be recycled or donated through Epson's product stewardship programs. In addition to these eco-features, you can make your own green mark by using the manual two-sided printing technique to save up to 50% on paper consumption.

With plenty of features to offer, you can take all your projects to the next level with the wireless Epson NX515 all-in-one printer. **EG**

The Best PC Investment

The Benefits Of Using A Surge Protector



ou and your family rely on your desktop or notebook computer to work, play, and learn, so chances are you want to protect it from data loss or hardware damage. One of the

best ways to safeguard your computer is to connect it to a surge protector.

What Is A Surge Protector?

A surge protector looks similar to a power strip and has multiple outlets to plug in your computer, monitor, and other peripherals such as a printer or fax machine. But more importantly, it also protects your computer and peripherals from power surges, which are sudden peaks in the electrical current flowing into your home. Power surges can be caused by downed power lines, faulty wiring, or regular electrical maintenance in your neighborhood. Fluctuations in the electrical current being delivered to your PC and its components can cause permanent damage to hardware, such as the

motherboard, processor, or hard drive, causing a loss of irreplaceable files. Over time, power surges can shorten the life span of your computer equipment, but a surge protector will absorb any increase in electrical current and shield your system from potential harm.

Features That Protect

A surge protector is equipped with an indicator light that tells you if the unit is functioning properly and safeguarding the devices plugged into it. A long-lasting surge protector will have a rating of at least 1,000 joules. The joule rating tells how much energy the surge protector can absorb before it will no longer function. While most surge protectors will last several years, it's possible for a sizable surge to wear out a surge protector, rendering it ineffective. When the indicator light on



your surge protector no longer works, you know it's time to purchase a replacement to continue to defend your computer setup against fluctuations in power.

Many surge protectors feature an EMI (electromagnetic interference) and RFI (radio frequency interference) filter, which ensures that interference from nearby devices such as a radio, household appliances, or another PC won't affect your computer's performance. Interference can cause your computer to hum or your monitor's image to flicker or wave and also protects your other devices from any interference your computer might emit. Surge protectors can also feature phone line and coaxial inputs, which will help safeguard your telephone and modem from the effects of a power surge.

Safe From Surges

Connecting your computer and its accessories to a surge protector will help keep your equipment out of harm's way from the unexpected power surges that can result from normal maintenance performed by your electrical company, faulty wiring, or downed power lines. **FG**

BY KRIS GLASER

Power Surge Culprits In Your Home

Although it's possible for lightning strikes to cause power surges, they are actually the least common cause. More often, power surges are attributed to the high-powered devices in your home, such as your air conditioner or refrigerator. These devices require a lot of power to cycle on and off, which can cause a fluctuation in your home's electrical system. This unavoidable surge happens regularly, making a surge protector a smart addition to your computer setup. ●

Outfit Your PC Right

Geek Squad's New Computer Setup Services



You might have already noticed their spiffy outfits and stylish wheels. Geek Squad, the crack team of computer experts available through Best Buy, has several new computer setup options.

In-Store Setup

Geek Squad's in-store options are simpler than ever. Choose from three options for having an Agent set up your computer system before you take it home.

Standard Security & Performance. Agents install and update prepurchased antivirus and antispyware utilities, then optimize your machine's performance and update Windows. (\$69.99)

Premium Security & Performance. Add a year of ViSpy coverage to the Advanced package. ViSpy provides no-charge diagnosis and repair if your computer contracts a virus or spyware infection. (\$129.99)

Netbook Security

If you're buying a Netbook, Geek Squad has two special options. Netbook Protect (\$49.99) helps ward off malware by installing antivirus, antispyware, and Windows critical

updates. Netbook Protect with ViSpy (\$79.99) adds a year of ViSpy coverage.

Data Protection

Geek Squad has also completely updated its data management services. External Hard Drive Setup (\$39.99) will configure a hard drive (of your choosing, purchased separately) and schedule a regular backup. The Standard Data Management package (\$99.99) moves data from an old to a new machine or other media and includes installation and configuration

of a one-year subscription of secure online backup.

House Calls

Geek Squad will also come to your home or office with any of three new setup options. Choose any option, listed below, for \$149.99, or combine one with an add-on offering described in the "Geek Squad Extras At Home" sidebar.

New Computer Setup. An Agent will unpack and set up the computer, display, and basic peripherals, such as the mouse and keyboard. He or she will also install one software title and configure a connection to your email account and ISP.

Wireless Networking Setup. A Geek Squad Agent will get a wireless network running (including two devices plus a router), configure the all-important security encryption, and set up file- and printer-sharing between your computers.

One Hour Training. Receive an hour of computer training at your own desk, on your own computer. An Agent will walk you through whatever you need to get your system and software up and running or cover the basics of digital photos, video, and music. **PG**

BY GREGORY ANDERSON



Extras At Home

While you have them onsite, you can add on the following Geek services for a little extra.

- Install software (per application): \$29.99
- Optimize performance: \$39.99
- Add device to network: \$49.99
- Extend training by 30 minutes: \$49.99
- Set up additional computer: \$69.99
- Data backup and transfer: \$69.99

A PC That Won't Crawl

When You Have A Need For Speed



Rule of thumb maintains that a PC bought fresh off the line will be obsolete in three years. Or, if not obsolete, showing its age performance-wise. It isn't that the computer loses processing power, but rather that operating systems and programs invariably become more resource-hungry as

they continue to develop.

As you look for a new computer, keep these considerations in mind:

CPU. If your needs are relatively light—say, running office software—a fast single- or dual-core processor should keep you humming along happily. If you'll also be working with video and audio files, then a quad-core machine will be the wiser investment.

Memory. Don't skimp here. The more memory your PC has available, the more breathing space it has to work. Doubling the stock memory, or better, is the single best performance booster you can give your PC. A computer with free RAM slots will let you add memory as the demands upon it increase in the future.

Hard drive. A common cause of flagging computer performance is too little free space on the hard drive. Music and video files alone can consume hard drive space at a rapid rate. As a good margin of safety, your drive should always have a minimum free space of 10GB or 10%, whichever is smaller—or more if you burn CDs or DVDs, which usually requires temporary free space equal to the size of the material you're burning.

If you're shopping for a desktop PC, choose one with open drive bays so you can add internal drives as needed. This is a better option than expanding onto external USB drives, as internal drives will deliver faster read/write speeds.

Additional expansions. Given the increasing importance of wireless connectivity, be sure you can add the necessary cards to communicate with Wi-Fi and Bluetooth devices, if they aren't already built into your machine. And if visual imaging or gaming is a priority, you may want to be able to upgrade the graphics card or add another.

With some forward thinking, you can be sure your new computer will deliver peak performance for years to come. **FG**

BY BRIAN HODGE



Sometimes Less Is More

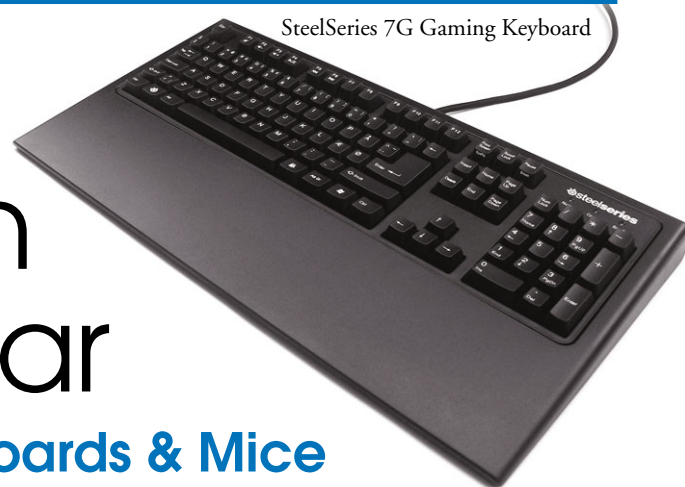
PCs often leave the factory front-loaded with trial software and other programs you may never want or need. This doesn't just gobble up hard drive space; it can also bog down your computer's performance.

The solution? Start from scratch by erasing the drive and reinstalling just the system software.

If you'd rather not tackle that job yourself, check with a CE retailer. Some computer dealers will, for a nominal fee, strip out the junk so you can take home a leaner, more nimble machine. ●

Gaming With The Right Gear

PC Game Controllers, Keyboards & Mice



If you want to get serious about PC gaming, you're going to need peripherals that are designed for intense and extended gameplay. A standard keyboard and mouse are good for everyday computing, but for action-packed online sessions, first-person shooter roles, and quick-paced car racing, you'll want to pull out the figurative big guns.

Gaming Controllers

When you're targeting your virtual foes in your favorite war game, a joystick will give you precision as you're aiming for the enemy barracks in the distance. Advanced joysticks include programmable buttons, manual throttle control, and ambidextrous features. For flight-based games, choose a flight control system with two separate joysticks to maneuver around mountain tops while jetting through the air. A flight switch panel and rudder pedals will provide even more

lifelike simulation. A car wheel, complete with a stick shift and pedals, can give you better handling as you satisfy your need for speed in a competitive car racing game.

Gaming Keyboards

A gaming keyboard can look and feel a lot different from a normal QWERTY keyboard due to the addition of action-based keysets or unique ergonomic styles, but you can grow accustomed to using such a keyboard for action game commands. Some gaming keyboards include special keys for navigation, multiple gaming modes, and sequential keystrokes. The SteelSeries 7G Gaming Keyboard (\$149.99; www.steelseries.com) features an ultra-quick response time in every keystroke, which can help improve your overall gaming results.



Razer's
Mamba
Gaming Mouse

Gaming Mice

A true gaming system isn't complete without a great gaming mouse. There are multiple styles, technologies, and features that make a gaming mouse worth the investment. You can choose wired, wireless, or a dual mode for ultimate flexibility. A laser mouse lets you have complete control over the mouse for highly accurate maneuvering in gameplay. Other gaming mice will include adjustable weight cartridges so you can customize the weights inside the mouse, which helps you maintain an appropriate balance so you can control the mouse better. Razer's Mamba gaming mouse

(\$129.99; www.razerzone.com) includes some of the unique features listed above, such as wired/wireless connectivity, laser technology, and a comfortable design for your hand.

Getting Down To Gaming Business

Adding these extras to your system can give your gaming experience a boost like you've never known. Before you purchase a gaming accessory, make sure that it's compatible with your PC or Mac operating system. **FG**

BY JOANNA SAFFORD

Gamepads

A PC gamepad is essentially a handheld controller for your computing system, similar to the controller you'd use with a video game. It has buttons, directional pads, and joysticks to enhance your experience with the game, especially when you're in the middle of hand-to-hand combat. A rumblepad with vibration feedback will give you a jolt when you're involved in an explosion or crash. Gamepads are capable of supporting hundreds of game configurations, so you can maximize each button press. ●

Wading Through PC Specs

Making Sense Of It All

Don't let your thrills turn to chills when you're on the hunt for a new computer. What should be an exhilarating purchase can all too easily devolve into an apprehensive one over all of the numbers and specs listed next to a desktop's or laptop's price tag.

Fortunately, you don't have to pay attention to *all* of those specifications, although it's a good idea to ask a sales associate what each of them means. Assuming you're pressed for time, let's take a quick look at the specs that are most important for the average user buying a PC. With few exceptions, the rule of thumb is higher numbers are better.

Screen size. If you're shopping for a notebook or a desktop PC that comes with a monitor, the diagonal screen size in inches is more important than you might think. After all, it's the part of your computer system you'll spend the most time looking at. A big monitor lets you run several programs at the same time in windows of a usable size. Movies and games also look better with the higher resolutions (pixel counts) of larger displays.

On the other hand, the bigger a laptop's screen, the bigger the laptop. Smaller screens help battery charges last longer, too.

Cores. These days, most computers come with multicore processors, meaning chips with two or more CPUs. That's a great thing. A processor with two, three, or four cores won't "max out" as easily when you're running demanding programs or even several applications at a time. A dual-core chip is unquestionably worth the money, although most users will notice smaller gains from a third or fourth core.

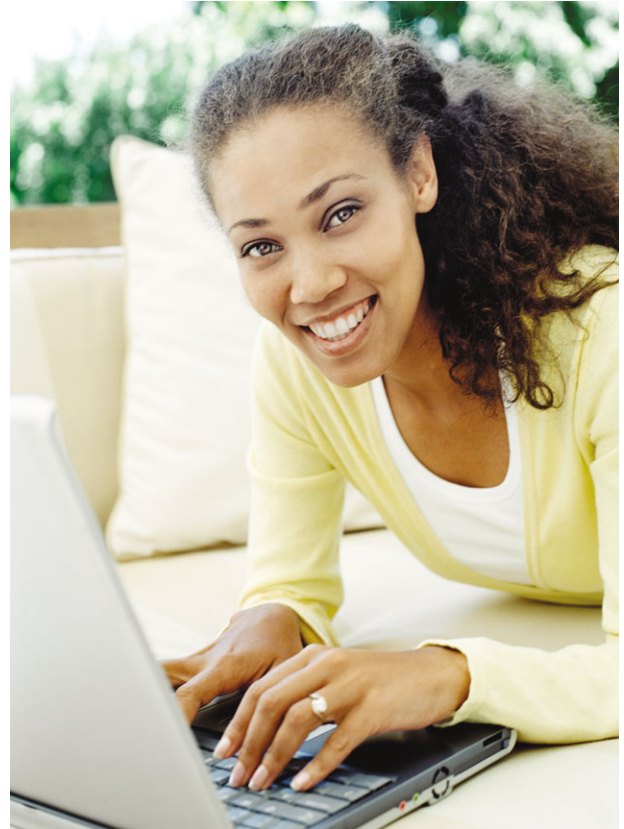
GHz. The more traditional measure of a processor's performance is its speed in GHz (gigahertz). GHz has become less important to most users than multiple cores, but it's still key to performance in video processing, file compression, and other uses.

RAM. The trick to RAM (also known as memory) is that you want enough for your current needs plus some more for future applications. You won't notice a difference in performance if you have "too much" RAM, but you'll certainly have a sluggish PC if you don't have enough.

For a Windows PC or a Mac, consider 2GB the bare minimum. However, more

than about 3GB is a waste with Windows unless you buy a PC with the 64-bit version of Windows Vista. The speed of the RAM in MHz (megahertz) follows the "more is better" rule.

Storage space. The hard drive or SSD (solid-state drive) holds the operating system, your programs, and your personal data in permanent storage. SSDs store data in flash memory, whereas hard drives use magnetic disks. Hard drive capacity is cheap, so don't skimp here. Get a lot, such as 500GB in a notebook or 1TB (terabyte) in a desktop. Faster SSDs are pricier, but 32GB or 64GB drives are relatively affordable. **FG**



PC Extras That Will Save You A Buck Or Two

Investments That Will Pay Themselves Off



iven the right accessories, you can do a lot with your computer. For example, by adding a printer, you can make your own invitations, labels, and calendars.

And in many cases, the right computer accessory can help you save money. To get the maximum return and improve the usefulness of your PC, here are some PC extras that are worth investing in.

Communicate For Cheap

Did you know you can use your computer to make free phone calls? All you and your friends need is a computer with a microphone (you can purchase a desktop or headset microphone if your PC doesn't offer one built in) and a free VoIP (Voice over Internet Protocol) application, such as Skype (www.skype.com). You can make PC-to-PC calls at no cost, and calls to landline or mobile phones typically cost much less than traditional phone service plans. Many VoIP applications also support video calls, so with the help of a Web cam, you can see and hear friends that are too far away to see often.

Print It At Home

Starting a scrapbook or photo book? Or maybe you want to create customized

stationery, party invitations, or business cards? Many image-editing applications feature templates for all kinds of photo and paper projects, and in conjunction with an inkjet printer and the appropriate paper, you can produce the type of projects listed above. Additionally, you'll have the freedom to create photo prints at your convenience. People working on photo projects will need a photo printer (a type of printer that delivers lab-quality photo prints) to turn their digital images into photo prints.



If you plan on incorporating vintage photos, letters, and other heirlooms that you wouldn't want to lose or cut up in your project, you can invest in a MFP (multifunction printer) that can handle all of your scanning, copying, and printing needs. Once you make a digital copy, you can crop, edit, and resize the image to best fit your scrapbook.

New Entertainment Sources

Looking for a way to cut down or cut out cable TV expenses? All the major networks now offer primetime programming on their Web sites, allowing you to stream TV shows directly to your PC. People with a Netflix Unlimited Plan can stream movies and TV shows to their PCs for no additional cost. If you want to enhance your media experience via your PC, add a set of speakers to improve the audio in movies, music, and games. A widescreen monitor, especially one that has an HD resolution, will deliver a cinematic experience when watching movies. **FG**

BY NATHAN LAKE

Stream Files To Your Home Theater

If you want to better utilize the content stored on your PC, a number of home-theater components, including some DVD players, gaming systems, and set-top boxes, feature the ability to stream the videos, music, and photos stored on your home-networked PCs to your media center.

For example, Samsung's BD-P1600 (\$299.99; www.samsung.com) is a BD (Blu-ray Disc) player that can stream all of the above as well as movies from Netflix. ●

FirstGlimpse



Graphically Speaking

What To Look For When Purchasing A Video Card

A computer gamer must have one to play titles at the highest settings; a video editor needs one to quickly render effects; and a media-center PC owner wants one to play HD content from his PC onto his home theater. A video card is just the trick for anyone who wants to improve her PC's ability to process high-end graphics and display content at high resolutions. To help you pick a video card that suits your upgrade needs, we'll explain the specifications you should look for.

It's A PCI-E World

The technology surrounding graphics cards changes fast, but one thing that hasn't changed recently is the popularity of the PCI-E (Peripheral Component Interconnect Express) x16 interface, which is the connector type found on nearly all graphics cards manufactured within the past two years. If you have a computer that requires an older AGP- or PCI-based graphics card, you may want to upgrade your PC.

Video Memory

Similar to your computer, a graphics card comes with its own memory, so it can store video data and effectively render images at millions of pixels per second. The more memory the video card offers,

the higher the video resolution your PC can handle. That being said, if you don't play video games at the highest settings or render video at HD quality, a graphics card with 512MB (or less) of video memory will be sufficient. Graphics cards also feature an internal processor. Look for a card with a core clock with better than 500MHz clock speed for best results.

Teamwork

If your computer supports Nvidia's SLI or ATI's CrossFireX, which allow you to use two (or more) identical Nvidia- or ATI-based graphics cards as one video-crunching device, you can install two cards and further improve the graphics performance on your PC. Additionally, some video cards feature two GPUs (graphics processor units)—think of it as a dual-core processor for video—to deliver dual GPU performance from a single video card. The most recently released graphics cards are also designed to perform HD video decoding, taking some calculation duties away

from the processor. If you want the most realistic color and video quality, look for a graphics card that supports HD video playback.

Video Output

Nearly all current graphics cards offer two dual-link DVI (Digital Visual Interface) outputs, which let you hook up two monitors and span your Windows Desktop across both screens. The digital DVI output is superior to the analog, VGA (video graphics array) interface found on older computers and monitors.

If you're looking to quickly hook up your PC to an HDTV, you should look for a graphics card with an HDMI output, which provides the DVI's all-digital, uncompressed video quality, as well as the ability to carry digital audio. High-end graphics cards also support HD resolutions, so your PC will deliver the same quality as your other HD devices. **EG**

BY NATHAN LAKE

Integrated vs. Dedicated

Some desktop computers may not have a graphics card at all. Instead, the computer's motherboard has a chip that performs the video processing. The biggest downside to integrated graphics is that the video chip shares your computer's memory, otherwise known as RAM, which degrades the PC's overall and video processing performance. ●

Essential

THINGS TO KNOW

NETBOOKS

Q What is a netbook?

A netbook is a lightweight computer that is smaller than a typical notebook, sometimes called a mini-notebook or just a mini. These pared-down computers are intended to serve as a supplement to your home PC and can be used for Internet access and other simple computing tasks while you're on the go.

Q What is the difference between a netbook and a notebook?

While netbooks have some of the same extra features that are found on notebooks, such as built-in Bluetooth capabilities, a built-in wireless networking card, a Web cam, and a card reader, they are not meant to be used for demanding computing tasks. Compared to notebooks, netbooks feature lower-powered processors and graphics chips, meaning you won't be able to play video games or run multiple applications at once.

Q What can I do with a netbook?

Netbooks can be used for most simple computing tasks, such as browsing the Internet, sending email, visiting social networking Web sites, and editing word processor documents.

Q What can't I do with a netbook?

Netbooks are not intended for intense entertainment purposes, such as playing games or editing your photo collection.

Q How much do netbooks typically weigh?

Most netbook models weigh an average of 3 pounds, so you can easily carry it along in a purse or backpack.

Q Why don't netbooks have disc drives?

Netbooks are designed to keep you connected when you're on the go, including access to email, instant messaging, weather, news, and maps. Without a disc drive, netbooks can be made lighter and more mobile.

Q What is the difference between a hard disk drive and a solid-state drive?

Traditional hard disk drives are comprised of moving parts, making them more susceptible to damage from bumps and drops, which could lead to data loss. Solid-state drives have no moving parts, so they are more stable and consume less power. Netbooks can have a hard drive or solid-state drive, or both.

Q How long will my netbook's battery last?

The length of your battery's life depends on how much power is consumed by the applications you are running. For example, if you're watching video on your netbook, the battery will last an average of three hours. With general use such as Internet browsing, your netbook's battery may last longer.

Q What operating system do netbooks use?

Because they have lower-powered components, netbooks need a less-demanding operating system that won't eat up resources, such as memory. Most netbooks feature Windows XP Home, though others are equipped with Linux.

Q How much do netbooks usually cost?

Netbooks can range anywhere from \$300 to \$900. More expensive models feature more memory, larger solid-state hard drives, and bigger screen sizes.



Which Netbook Is Best For You?

Netbooks don't offer the full capabilities that notebooks do, but these compact devices are ideal for those who need to stay connected while on the go. To find the netbook that fits your mobility needs, here's a comparison of the latest models.

		Operating system	Processor	Hard drive size; RAM	Graphics card	Memory card reader	Ports
	What It Means	The software (usually Windows XP or Linux) that controls your PC	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	Controls the quality of the video and images you see on-screen	Slots that can read media cards without a separate peripheral	Sockets that give your computer access to different peripherals
	Asus Eee PC 900HD MSRP: \$249.99* SKU 9299537	Windows XP Home	900MHz Intel Celeron M353	160GB; 1GB	Internal UMA	SD/SDHC/MMC	3 USB
	MSI Wind Netbook 120U MSRP: \$379.99* SKU 9229863	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/MMC/MS/MS Pro	3 USB
	Asus Eee PC 1000HE MSRP: \$399.99* SKU 9251392	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/SDHC/MMC	3 USB
	Dell Inspiron IM10-2727 MSRP: \$399.99* SKU 9245346	Windows XP Home	1.33GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 500	SD/SDHC/MMC/MS	3 USB; 1 HDMI
	Samsung NC10 MSRP: \$419.99* SKU 9365509	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/SDHC/MMC	3 USB
	HP Mini 1153NR PC MSRP: \$449.99* SKU 9350506	Windows XP Home	1.6GHz Intel Atom	16GB; 1GB	Intel Graphics Media Accelerator 950	SD/SDHC/MMC	2 USB
	Samsung 310 MSRP: \$479.99* SKU 9365518	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/SDHC/MMC	3 USB
	Sony VAIO Lifestyle Netbook MSRP: \$899.99* SKU 9210025	Windows Vista Home Basic	1.33GHz Intel Atom	60GB; 2GB	Intel Graphics Media Accelerator 500	SD/SDHC/MMC/MS Duo	2 USB

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which Notebook Computer Is Best For You?

A notebook computer is a pretty big purchase for most people, and it's usually a bit overwhelming, too. This chart compares the features and specs from several different types of notebook models.

		Operating system	Processor	Hard drive size; RAM	Screen size	Dimensions; Weight	Optical drives; Media card reader
	What It Means	The software (usually Windows or Mac OS X) that controls your computer	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	The diagonal measurement of the notebook's screen	Height x width x depth; How much the laptop weighs	Drives that can read and write discs; Slots that read media cards without a separate peripheral
	Compaq Presario CQ60-215DX MSRP: \$399.99* SKU 9168063	Windows Vista Home Premium	2GHz AMD Athlon X2	250GB; 2GB	15.6 inches	1.7x14.9x9.9 inches; 6.5 pounds	Double-layer DVD±RW/CD-RW; Yes
	Toshiba Satellite L305-S5919 MSRP: \$433.99* SKU 9191849	Windows Vista Home Basic	2.16GHz Intel Celeron	160GB; 2GB	15.4 inches	1.5x14.3x10.6 inches; 5.5 pounds	Double layer DVD±RW/CD-RW; Yes
	Dell I15-156B MSRP: \$499.99* SKU 9149557	Windows Vista Home Premium	2.16GHz Intel Pentium Dual-Core	160GB; 3GB	15.6 inches	1.5x14.7x9.6 inches; 6.5 pounds	Double-layer DVD±RW/CD-RW; Yes
	Sony Vaio CS215J/W MSRP: \$799.99* SKU 9153195	Windows Vista Home Premium	2GHz Intel Core 2 Duo T6400	250GB; 4GB	14.1 inches	1.6x13.2x9.6 inches; 5.7 pounds	Double-layer DVD±RW/CD-RW; Yes
	HP Compaq 6730s MSRP: \$899.99* SKU 9059243	Windows Vista Business with XP Pro Downgrade	1.8GHz Intel Core 2 Duo Mobile	250GB; 3GB	15.4 inches	1.3x14.1x10.5 inches; 5.8 pounds	Double layer DVD±RW/CD-RW; Yes
	HP Pavilion dv3510nr MSRP: \$1,199.99* SKU 9027714	Windows Vista Home Premium	2GHz Intel Core 2 Duo	320GB; 4GB	13.3 inches	1.4x12.6x9 inches; 4.6 pounds	Double-layer DVD±RW/CD-RW; Yes
	Toshiba Satellite E105-S1402 MSRP: \$1,199.99* SKU 9022979	Windows Vista Home Premium	2.26GHz Intel Core 2 Duo	320GB; 4GB	14.1 inches	1.2x13.4x9.7 inches; 5 pounds	Double-layer DVD±RW/CD-RW; Yes
	Apple MacBook Air MC234LL/A MSRP: \$1,799.99* SKU 9391384	Mac OS X 10.5 Leopard	2.13GHz Intel Core 2 Duo	128GB; 2GB	13.3 inches	0.8x12.8x8.9 inches; 3 pounds	None

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Software Listings

Get More Out Of Your PC

Computers can be used to create greeting cards, play games, balance your checkbook, and more. The thing is, most of these functions aren't available straight out of the box. To fully harness your computer's potential, you'll need to buy software. Here are some options.

Art/Illustration/Graphics



Corel Paint Shop Pro Photo X2 Ultimate
\$99.99*
www.corel.com

Professional photo-editing software in an easy-to-use package. The Ultimate version also comes with a bonus pack loaded with free extras.



Adobe Photoshop Elements 7
\$99.99*
www.adobe.com

Photoshop Elements 7 from Adobe makes it easy to fix red-eye, combine photos for the perfect group shot, or tweak the color balance to make your photos look their best.



Roxio Creator 2009
\$99.99*
www.roxio.com

With Roxio's Creator 2009, preserving your memories has become simpler than ever. You can now easily edit and touch up your photos, create unique DVDs using your home movies, and organize your music collection.



Broderbund The Print Shop 23 Deluxe
\$49.99*
www.broderbund.com

Easily create banners, business cards, letterheads, calendars, photo greeting cards, invitations, and more right from your computer with The Print Shop 23 Deluxe from Broderbund.

Audio/Video



Pinnacle Studio Ultimate Version 12
\$129.99*
www.pinnaclesys.com

Use automated and powerful video- and audio-editing tools to create and share your home movies, even in HD.



Apple iLife '09
\$79*
www.apple.com

Use Apple's popular iPhoto, iMovie, iWeb, GarageBand, and iDVD on your Mac to organize photos, create a Web site, record music, or edit movies.



Cakewalk Music Creator 5
\$34.99*
www.cakewalk.com

A user-friendly interface lets you bring your music to life and give it a professional sound. You can record, transcribe, and print your very own music.



Apple Final Cut Express 4
\$199.99*
www.apple.com

A drag-and-drop interface provides seamless movement between editing, trimming, and adding effects to your videos. The software is compatible with popular HD formats, including HDV and AVCHD.

Business Applications



Microsoft Office Ultimate 2007
\$679.95*
www.microsoft.com

Use all of today's most popular business office applications—Excel, PowerPoint, and Word—plus Office Groove, InfoPath, OneNote, Access, Publisher, and Outlook to complete a project of any size or complexity.



Adobe Acrobat 9 Standard
\$299*
www.adobe.com

Easily create, combine, and manage various PDF documents. The new version also includes a Form Wizard and commenting tools.



Intuit Quicken Home & Business 2009
\$99.99*
www.intuit.com

Manage your money and your bills with ease—keep track of your accounts and set alerts to remind you of due dates. You can also save money through Quicken Picks' online coupons and discounts.



Smith Micro Software VMware Fusion 2
\$79.99*
www.vmware.com

Use VMware Fusion 2 to run Windows applications on your Intel-based Mac, giving you greater freedom and productivity.

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Games/ Entertainment



2K Games Sid Meier's Civilization IV: The Complete Edition

\$39.99*

www.2kgames.com

Get the complete Civilization IV experience with the DRM-free version of classic Civilization IV plus three expansions.



Her Interactive Nancy Drew Dossier

\$19.99*

www.herinteractive.com

You, as Nancy Drew, go undercover on a movie set to investigate a Hollywood-style mystery. Uncover who is behind suspicious press leaks and production accidents with Nancy's sleuthing skills. Earning points during the game reveals an alternate ending.



Electronic Arts The Sims 3

\$49.95*

www.ea.com

Create your very own Sims. Customize their personalities, appearances, and homes, then send them out into the world to explore the neighborhood and meet new friends.



Enlight Restaurant Empire II

\$19.99*

www.enlight.com

The sequel to Restaurant Empire takes you further into the culinary universe, where managing a restaurant isn't always a picnic. Includes new restaurant themes, categories, and more.

Home Productivity



Nuance Dragon NaturallySpeaking 10 Preferred

\$199.99*

www.nuance.com

Dictate emails, reports, and other documents much faster than you can type and let Dragon NaturallySpeaking do the typing for you. The software has an accuracy rate of up to 99%.



Apple MobileMe

\$99*

www.apple.com

MobileMe, Apple's

Internet service, lets you keep your email, contacts, and calendar up-to-date across your iPhone, iPod touch, Mac, and PC. It also lets you store and share documents online via iDisk, and you can manage everything online through a suite of Web applications at www.me.com.



Microsoft Streets & Trips 2009

\$39.95*

www.microsoft.com

Heading out on a summer road trip? Use Streets & Trips to plan your adventure and share your travel plans with friends and family who will be joining you along the journey.



Susteen Data Pilot Backup & Sync Kit (LG)

\$24.99*

www.datapilot.com

Back up and sync your cell phone memory to your computer with a backup and sync kit. Kits for other phone manufacturers are also available.

Security/ Utilities



Kaspersky Labs Internet Security 2009

\$79.95*

www.kaspersky.com

Premium protection that's updated hourly to keep your system safe from even the most recent threats.



Kaspersky Labs Anti-Virus 2009

\$59.99*

www.kaspersky.com

Kaspersky's updated Anti-Virus 2009 has added an advanced antivirus engine that increases scan times, giving you even better protection against viruses, Trojans, worms, spyware, adware, and more.



Webroot Software Spy Sweeper With AntiVirus

\$49.99*

www.webroot.com

Protect up to three computers from viruses and spyware. Spy Sweeper stops both known and potential threats by blocking suspicious activity, and everyday updates give your computer ongoing protection.



Trend Micro AntiVirus + AntiSpyware 2009

\$39.95*

www.trendmicro.com

Automatic scans, updates, and outbreak alerts make it easy to safeguard data and files. Protects against viruses, worms, spyware, and Trojan horses, keeping your personal data safe.

Backup/ Recovery



Symantec Norton Ghost 14.0

\$69.99*

www.symantec.com

Back up your entire computer or select specific files for backup to ensure you're able to recover from any unforeseen events, such as a crash or virus attack.



iolo System Mechanic

\$49.95*

www.iolo.com

With System Mechanic, you can find and fix errors and fragmentation on your PC, clean out clutter, and optimize your system for best performance.



Acronis True Image Home 2009

\$49.99*

www.acronis.com

With just one click, you can rest assured that your computer—operating system, files, applications, settings, and all—is backed up, so you can quickly recover from a crash.



iolo DriveScrubber

\$29.95*

www.iolo.com

When it's time to get rid of your old computer, use DriveScrubber to ensure all your personal data has been deleted. DriveScrubber will wipe your entire drive, including free space, and restore damaged drives.

Which Epson Stylus All-In-One Printer Is Right For You?

EPSON®
EXCEED YOUR VISION

Epson's Stylus all-in-one printers combine copy, scan, and photo-printing capabilities. Whether you want to scan old, faded photo prints and restore their colors or make borderless prints of photos you've taken lately, the Epson Stylus NX415 and NX515 can help you get the job done.

Model Name SKU	What It Means	Epson Stylus NX415 9318758	Epson Stylus NX515 9318749
MSRP		\$99.99*	\$149.99*
Print Speed	How many pages can be printed in one minute	Maximum: 34ppm black and color Laser Quality: 4.3ppm black/4.3ppm color	Maximum: 36ppm black and color Laser Quality: 15ppm black/9.3ppm color
Photo Enhancement Features	Features that help make your photos look better	Restore colors to faded photos; Corrects red-eye and under- or over-exposed photos with one touch	Restore colors to faded photos; Corrects red-eye and under- or over-exposed photos with one touch
WiFi/Ethernet	Can be connected to your wired or wireless home network	No	Yes; WiFi and Ethernet are built in
Ink	What type of ink the printer uses	4 individual all-pigment ink cartridges	4 individual all-pigment ink cartridges
LCD Size	Size, in inches, of the built-in screen	2.5-inch vibrant tilt LCD	2.5-inch vibrant tilt LCD
Multiple Copies	Create more than one copy with one touch	Yes, up to 99 copies	Yes, up to 99 copies
Two-Sided Printing	Print on both sides of the paper	Yes	Yes
Memory Card Slots	Prints PC free with memory cards	Yes	Yes
Creative Software	Software that lets you easily print calendars, greeting cards, and more. A \$30 value!	No	Yes
Print/Scan Resolution	How many dots per inch	Print Resolution: 5,760 x 1,440 dpi Scan Resolution: 1,200 x 2,400 dpi	Print Resolution: 5,760 x 1,440 dpi Scan Resolution: 1,200 x 2,400 dpi
Reduce/Enlarge Documents	Instantly reduce or enlarge documents	25 to 400%	25 to 400%
PC-Free Printing	Prints photos without needing your computer	Yes	Yes
Borderless Photo Prints	Images print to the edge of the paper	Yes—PC-Free	Yes—PC-Free
PictBridge Support	Print directly from your digital camera	Yes	Yes
Perfect For	Who can benefit most from this printer's features	Those who need a solution for all of their printing needs, including photo printing	Families who want to share their printer over a wireless network

* Prices listed in this issue are for general reference and may vary from retailer pricing.

What Is The Epson Advantage?

- Epson all-in-one printers offer high-resolution prints, so you get crisp, clear photos every time you print
- Corrects digital photos better than the competition
- You don't have to buy special cartridges created specifically for photo printing

- Instant-dry, smudge-, fade-, and water-resistant ink
- These printers offer fast print speeds, so you won't have to wait to create unforgettable prints: The Epson Stylus NX515 prints two times faster than competitively priced printers.

FirstGlimpse

Accessories & Services

A computer is a big investment, and now that you've taken the plunge, it's time to decide what you need to go along with your shiny new purchase. We've rounded up several of our favorite

must-have accessories for every computer owner. Whether you have a laptop or desktop, be sure to add these items to your shopping list to complete your computing experience. **FG**

KEYBOARD

- An ergonomic design can cut down on wrist strain associated with carpal tunnel syndrome
- Bluetooth connectivity lends itself to a tidy desk with one less wire to contend with
- A specialty model, such as a gaming or media keyboard, can add functionality to your pastime of choice

SURGE PROTECTOR

- Ensure the electrical current running to your desktop or laptop computer doesn't exceed proper levels
- Portable models will protect your laptop when you're on the go for work or play

CLEANING KIT

- Specially designed cleaners will keep your LCD or plasma computer screen clean without running the risk of scratching its surface
- Cloths are often made out of low-conductivity material in order to reduce static

USB HUB

- Offers an affordable way to connect all of your peripherals, even if you have more gadgets than USB ports
- Adds the convenience of easy USB access—no more reaching behind your computer to plug in your USB devices

EXTERNAL HARD DRIVE

- Protect precious video and photo memories with backups
- Keep your computer running more efficiently by saving large files, such as your media collection, on an external drive

MOUSE

- A wireless mouse will cut down on cable clutter at your desk while offering the convenience of portability for laptop use
- A gaming mouse can deliver better accuracy and speed for the ultimate in control
- Consider customizable buttons if you want to be able to access media, files, or programs with one-touch access

PRINTER

- A quality photo printer will eliminate trips to the drugstore for 4x6 prints and give you the ability to instantly share your photo memories
- An all-in-one model is the perfect addition for any busy family that needs a device that can operate as a copier, scanner, fax, and printer

WEB CAM

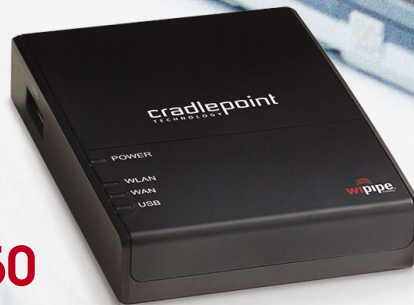
- Bridge the gap between long-distance family and friends with online video chatting by adding a Web cam to your setup

COMPUTING SERVICES

- To keep your desktop or laptop computer in tip-top shape, take advantage of the computing services offered at your local CE retailer. They can help you keep your machine running smoothly and free from the dangers that lurk online.
- Computer Setup & Networking
- Virus & Spyware Removal
- Data Backup & Recovery
- Hardware & Software Upgrades
- Training & Consultation

Wi-Fi Where You Need It

CradlePoint's CTR350 Keeps You Connected



CradlePoint's CTR350 3G
Mobile Broadband Travel Router
\$99.99
www.cradlepoint.com



Wi-Fi hotspots are great for staying connected while you're stopped at a coffee shop or restaurant. But how do you send email or watch online videos when you can't find a wireless network? CradlePoint's CTR350 3G Mobile Broadband Travel Router (\$99.99; www.cradlepoint.com) allows you to create your own 802.11b/g Wi-Fi hotspot wherever you need it.

Instant Wi-Fi Hotspot

Using the 3G mobile broadband phone networks, the CTR350 creates an encrypted Wi-Fi network that allows you to connect multiple wireless devices to the Internet, such as your Wi-Fi-compatible netbook, laptop, game console, or photo printer. Up to 16 wireless devices can utilize the hotspot created by the CTR350, which is perfect for sharing Internet access with your family, friends, or colleagues at home or on the road.

Simple Setup

When a Wi-Fi hotspot is nowhere in sight, using a USB modem with a notebook or a smartphone that accesses the Internet via 3G cell phone towers is the best way to ensure that you'll have Internet access wherever you're

headed. However, by using a data service plan, you're limited to using your notebook or smartphone to connect to the Internet. That means if you have more devices or users you also want to connect, they're just out of luck. By adding the CTR350 to your Internet setup, you'll no longer be limited to a single Internet connection. Using the same 3G cellular tower signals your USB modem receives to access the Internet, the CTR350 creates a wireless 802.11b/g network that has a range up to 150 feet and can be shared with up to 16 Wi-Fi compatible devices. Simply

plug your USB modem into the CTR350, and you'll be able to connect fellow work colleagues or an entire household to the Internet in areas where a Wi-Fi network is unavailable. For those who use their smartphone as a tethering device, which essentially doubles the use of your smartphone as a modem for your notebook, the CTR350 can also pair with your phone to create a Wi-Fi network. With one Ethernet port, the CTR 350 delivers another way in which you can hook up your non-wireless Internet devices.

Features & Benefits

Not only does the CTR350 end your need to search for Wi-Fi hotspots, but it also creates a secure connection using full encryption and user permissions. And because the CTR350 is optimized to use 3G signals for Internet access, your connection speed can be up to 20 to 30% faster. This will come in handy when you've made an overnight stop on your RV trek across the country and you want to quickly upload photos from the day's events to your travel blog.

The CTR350 is the smallest router in its class, making it ideal for travel or those with an on-the-go lifestyle. It's about the size of a deck of cards and weighs less than 43 ounces, making it the perfect companion on your next journey away from home. **FC**

Do More With Your Mobile Router

A notebook isn't the only device you can use in conjunction with a CTR350-created Wi-Fi network. For example, if your camera uses a wireless memory card, you can send pictures to your computer without using cables or make prints of your favorite shots on a wireless printer. The CTR350 will also allow gamers to access the Internet with their portable gaming device to go head-to-head with their friends back home or an audiophile to share their favorite tunes with others using a Wi-Fi enabled MP3 player. ●

The Same But Different

The Connection Between iPods & MP3 Players



A

ll iPods are MP3 players, but not all MP3 players are iPods. Confused? You're not alone. Many people falsely assume that because Apple (www.apple.com) essentially created the mobile digital audio market with the 2001 release of its first iPod (a 5GB model at a whopping \$399, no less) that iPods are a separate entity from other MP3 players. The fact is that just as Harley Davidson is one brand of motorcycle, the iPod is one brand of MP3 player. Still, despite their kinship, iPods differ from other MP3 players in several ways, which we'll detail here.

All In The Design

Arguably, approaches in design have always been the most noticeably striking difference between iPods and other

MP3 players, as iPods seemingly always stay a step or two ahead of their brethren where sporting unique, elegant shapes, sizes, and colors is concerned. Further, the iPod's proprietary click wheel has long set the standard for MP3 player navigational systems in terms of efficiency and ease of use. Historically, a caveat for obtaining this style and trail-blazing innovation has been paying more for iPods than comparable players.

Conversely, though many manufacturers have followed Apple's lead, including incorporating touchscreen displays, Apple lags behind other makers by omitting such basics from the iPod as an integrated FM radio, voice recorder, and memory card slot. Software-wise, Apple also locks iPod owners into using iTunes to sync to their digital music catalogs. Other makers also bundle their own media management software, though many

also enable their players to work with such popular media managers as Windows Media Player and Winamp.

Until recently, another major difference was the iPod was the only portable player that could play the copyright-protected songs (downloaded as protected AAC files) sold at Apple's iTunes Store. In April, however, Apple removed the DRM protection from the entire iTunes music catalog; thus other MP3 players that support unprotected AAC (Advanced Audio Coding) files can now play iTunes-purchased music. iPods, however, still lack support for such popular formats as WMA (Windows Media Audio) and WMV (Windows Media Video). Positively, virtually every MP3 player supports MP3 files, which are widely available at numerous music download Web sites, including Napster (www.napster.com) and Amazon MP3 (www.amazon.com).

Common Ground

Although iPods lack the integrated Bluetooth support a few players provide, the iPod touch (\$229 and up) has integrated Wi-Fi support, as does Microsoft's Zune (\$99 and up; www.microsoft.com), Slacker's G2 (\$199.99; www.slacker.com), and Archos' 705 Wi-Fi (\$274.99; www.archos.com). iPods and various MP3 players also both provide various extras (calendar, contacts, alarm, etc.) and support for playlists, Audible files, and video playback. **FG**

BY BLAINE FLAMIG

Digital Radio On The Go

Check Out A New Sound

If your ears are yearning for fresh sounds, then give digital radio a listen; you might be surprised by what you hear. Digital radio offers a multitude of stations and variety your MP3 player could only dream of. The digital radios of today deliver crystal-clear, static-free CD-quality sound that puts traditional radio to shame. Better yet, some digital radio players can be docked in home audio and car audio systems and also connect to the Internet to download even more songs.

Radar Love

Unlike traditional radio that gets beamed from an antenna, satellite radio uses—you guessed it—satellites to beam down signals to satellite radio receivers anywhere you happen to be, day and night—in your car, at home, or in your pocket—without the fading and clarity loss you experience with terrestrial (earthbound) radio. Think of satellite radio as the cable TV of radio. On some channels, you can even get the music you love commercial-free. Satellite radio also offers exclusive content such as live concert broadcasts, popular radio talk shows, sporting events, comedy, traffic and weather, and more. Satellite radio from Sirius and XM, now a single company called Sirius XM, delivers the ultimate in listening variety. Sirius currently broadcasts more than 130 CD-quality channels, and XM offers more than 170 channels. Pioneer's Portable XM Satellite Radio Receiver (\$229; www.pioneerelectronics.com), for

HD Radio Basics

Although the term implies some relation to high-definition content, there is actually no relation to HDTVs or HD audio. Also, unlike digital TV, HD Radio's digital broadcasts will broadcast along with the analog version, and the government hasn't set a digital transition date, effectively leaving the transition to an all-digital broadcast up to the individual station owners.

HD Radio Benefits Include:

- FM stations now with CD-quality sound
- AM stations now with FM-quality sound
- Crystal-clear reception
- Free to listen just like current AM and FM channels

instance, lets you access XM broadcasts and listen to your own music on a microSD card. You can also tap into the same channels and events you enjoy on your portable satellite player using an Internet browser.

Digital Radio In The Palm Of Your Hand

Digital radio is a technology still in its infancy, but aside from the satellite variety discussed above, there are some other options available to you. The predominant form of digital radio is HD Radio, and it closely resembles traditional radio in that current AM and FM radio stations can simulcast both digital and analog audio. Benefits include CD-quality broadcasts and textual data such as traffic, weather, and artist name and song titles. HD Radio also features signal clarifying capabilities.

HD Radio, like traditional radio, is free, but you can only hear HD Radio if you have an HD Radio receiver. Check

your local CE retailer for HD Radio-capable car audio systems. Portable HD Radio players aren't currently available, though Microsoft's soon-to-be-launched Zune HD is purported to have a built-in HD Radio receiver.

If your ears are longing for crystal-clear CD-quality audio in a portable digital radio, then the Slacker G2 Personal Radio Player (\$199.99 [4GB] and \$249.99 [8GB]; www.slacker.com) is your ticket to an expansive musical wonderland. Slacker's player lets you tap into the popular Web service (www.slacker.com) to download stations that you've customized and stations that have been preconfigured by certified slackers.

Radio Rebirth

You'll never think of radio the same way once you've given a satellite or digital portable radio a chance to dazzle your ears. **FG**

BY ANDREW LEIBMAN

Let Your Phone Be The Navigator

Take Advantage Of GPS Capabilities



Using a standalone GPS device in your car can give you beneficial travel information, including voice-guided directions, live traffic updates, and a hearty list of points of interest. Many cell phones, however, support navigation software offering many of the same features.

A Smart Way To Use Your Phone

Some smartphones come with navigation software preinstalled, coupled with a GPS chip, which delivers GPS technology to the phone. Other phones may have only one of these features, so you will need to add the other for full GPS capabilities.

Like many standalone GPS devices, navigation software for your phone offers much more than street maps. Some phones offer spoken turn-by-turn directions, which will let you keep your eyes on the road while the GPS tells you where to go. In case you miss a turn or an exit, most mobile phone navigation software also supports automatic rerouting capabilities.

Thanks to the Internet connectivity that many mobile phones have, you can receive the same live traffic updates that are available on standalone GPS units. This feature will help you avoid traffic congestion and construction zones to get you to your destination quickly and safely. Some mobile phones with GPS can

also provide weather and flight information as well as current fuel prices from nearby gas stations. And because many phones offer voice-dialing capabilities, you can use voice commands to change the address of your destination or find a gas station along your route. This way, you don't have to mess with your phone's GPS settings while you're driving.

In addition to delivering driving directions, several GPS mobile phones can also work in pedestrian mode. This will provide you with directions when you're on foot and can be convenient when you park your car a few city blocks away from your destination.

Standalone GPS Units vs. GPS On Your Mobile Phone

Standalone GPS units and GPS mobile phones offer plenty of the same advanced features, but there are a couple of differences worth noting.

Generally, standalone GPS units have larger screens than mobile phones, which makes it easier to view your route

while you're driving. You can mount your mobile phone on your dashboard as you would your GPS device, but because your smartphone is (obviously) also a phone, you could be forced to take or make a phone call while you are driving, in turn abandoning the GPS.

The battery life is longer on standalone GPS units. GPS capabilities can drain your mobile phone's battery life quickly because the navigation programs take a lot of battery power to operate. Also, because you are only using your standalone unit for a single purpose, the five hours of battery life will last much longer.

However, the convenience and cost-efficiency of only having to tote your phone around (rather than both your phone and your GPS unit) are two reasons why you should still strongly consider using your phone as a GPS device. Regardless of which you choose, each GPS option delivers convenient navigation features to help you get from Point A to Point B. **EG**

BY TESSA WARNER BRENNEMAN

Accessories For Your GPS-Enabled Phone

If you plan on using your phone as a GPS unit in your car, consider purchasing a dashboard mount because it's dangerous to drive while holding your phone. Also, because using your phone's GPS capabilities can drain the battery quickly, it's wise to purchase a car charger if you don't already have one. ●

Back Up Your Mobile Phone

Never Lose Your Contacts, Ringtones & Photos

Are the phone numbers and contact information stored on your mobile phone saved somewhere else? What about the calendar appointments, photos, and music? If you don't have a backup of your information and files, consider what you'd lose if you lost or broke your mobile phone. And even if you could redownload some of the lost files, such as ringtones, think how long it would take to find all of the media. Fortunately, you can purchase backup and sync kits, which are similar to PC backup software, to save most of your mobile phone data on your computer.

What's In The Box?

A mobile phone backup and sync kit includes a USB cable with a proprietary connector for your phone so it can communicate with your PC and the software necessary to access, back up, and sync data. Backup and sync kits are available as either universal kits, which include multiple cables to support multiple phones from a single manufacturer, or individual kits that have one cable that works with

select phone models. Either way, you'll want to make sure the kit you purchase supports your phone model, rather than just the phone's manufacturer. Some kits also include support for Bluetooth to let you use your phone's Bluetooth connection to wirelessly transfer data to a Bluetooth-enabled PC.

What Does A Backup & Sync Kit Do?

The software included in a backup and sync kit lets you copy almost all of the personal data saved on your mobile phone, including your contacts, calendar appointments, ringtones, text messages, photos, and music. Backup and sync kits typically don't copy files that you can save to a phone's removable memory card, such as documents or spreadsheets, so you may need to manually back up certain files. A kit's sync function will update your phone's contact and calendar information with the email client on your PC, such as Outlook Express. You'll no longer need to manually update or add new contact information to both your mobile phone and PC—a big time-saver for people who keep all of their appointments and addresses in digital form. The



included application also gives you the ability to transfer the data to a new phone or restore it to your existing phone, in case you accidentally delete an important contact or appointment.

Other Advantages

If you have a camera phone that doesn't offer a memory card slot, backup and sync software gives you a way to transfer the pictures off of the mobile phone so you can edit and email them to friends and family. And if your mobile phone offers a data plan, many backup and sync applications give you the ability to use your mobile phone as a modem, which is ideal for laptop users who can't guarantee Wi-Fi access on the road. **FG**

BY NATHAN LAKE

Secure Your Phone's Data

If you use your mobile phone to access the Internet or store sensitive data, such as recent financial transactions, it's a good idea to invest in a mobile security application. Some applications are designed to encrypt the data on your mobile phone, while others serve as mobile Internet security suites that include antivirus, antispyware, and firewall features. ●

FirstGlimpse

CE Retailers' Mobile Services

One-Stop Convenience

If you've wandered the aisles of your favorite CE retailer, you've likely seen a wireless kiosk or two. What you may not realize is these "stores within a store" can provide many benefits beyond visiting a traditional cell phone carrier's store. Here's a closer look at the mobile services you'll find at CE retailers.

Many Plan Options

In many cases, mobile stores within a CE retailer's store offer services from multiple carriers. This makes it easy for you to directly compare one carrier's plans to another's. On the flip side, if you were at one carrier's wireless store, it'd be highly unlikely that you could get straightforward facts about how its services and plans compare to another carrier. With in-store mobile services from a variety of carriers, you'll get all the facts in one location.

One-Stop Shop

For many of us, it seems that there is never enough time to get everything done. Because CE retailers frequently offer accessories for all types of phones, you can get everything you need for your new phone—including a memory card, Bluetooth headset, and case—without having to visit another store.

Handheld Comparison

Each carrier offers its own set of handsets to be used on its network. If you're

trying to choose between two phones, you'll be able to compare them side-by-side, pick them up, and interact with them in a mobile store. In addition, you will be able to compare handsets from various carriers. When upgrading phones, many wireless stores can also help transfer your address book from your old phone. **EG**

BY JENNIFER JOHNSON



Mobile Service Offerings

Best Buy has rolled out Best Buy Mobile. This joint venture with Carphone Warehouse aims to provide a better mobile phone shopping experience. In addition to many of the benefits listed above, Best Buy Mobile can provide customers with impartial, in-depth information for about eight to 10 carriers and help customers find a carrier that'll best suit their needs. These mobile phone specialists are noncommissioned, so you know you'll get honest input. In addition, Best Buy Mobile's phone experts can help explain the various technologies and services that are available today and show you how those services can fit into your lifestyle.

All of us want to get a good deal without a lot of hassle. Prices for phones through Best Buy Mobile are clearly marked, and you won't have to deal with rebates. Should something go wrong with your phone, Best Buy can provide repair services and loaner phones to help you get back up and running. Finally, because Best Buy offers a number of other products outside the mobile realm, associates can demonstrate how your phone or wireless service can interact with other devices such as your laptop. ●

FirstGlimpse

Essential

THINGS TO KNOW

INTERNATIONAL CELL PHONE USE

Q Will my current cell phone work in other countries?

That depends on the network your cell phone uses, your service provider, and the frequency band(s) the cell phone works on.

Q What networks do cell phones use?

The two most common networks for cell phones are CDMA (Code Division Multiple Access) and GSM (Global System for Mobile Communications).

Q Which countries use CDMA networks and which use GSM networks?

CDMA is used in the United States and about 40 other countries, including Korea and Japan. GSM is the standard network in Europe and is used in Africa, Asia, Australia, the Middle East, the United States, and Central and South America.

Q Which U.S. service providers use which network?

Verizon, which encompasses Alltel, and Sprint, which includes Nextel, use CDMA. T-Mobile and AT&T use GSM.

Q What are frequency bands?

A frequency band is a range of radio wave frequencies measured in MHz (megahertz). GSM phones operate on at least one of four bands. Bands 850 and 1900 are used in the United States, and bands 900 and 1800 are used in Europe.

Q Does it matter which bands a GSM phone uses?

When buying a phone to use at home and abroad, buy a GSM phone that uses at least a triband (900/1800/1900) so you will

have coverage in both places. (Dual-band GSM phones—900/1800—operate only outside the United States.) A quad-band phone operates on all four frequency bands

Q Should I buy a locked or unlocked phone for traveling abroad?

Buy an unlocked phone for international use. An unlocked phone can use a SIM card from multiple carriers. That means you can buy a SIM card with minutes in the country you're visiting, get local wireless service throughout that country, and not worry about roaming charges.

Q What is a SIM card?

A SIM (Subscriber Identification Module) card is a chip that stores a phone's subscriber-specific information, such as the number assigned to the phone and contacts. Phones that operate on the GSM network use SIM cards.

Q Will my service provider charge me with roaming charges?

This depends on the type of plan you have with your carrier and the country in which you are calling. For instance, some service providers offer monthly international service plans that discount international roaming charges.

Q Are international calling plans available?

Yes. Carriers offer plans for calling in other countries and plans for calling to other countries from the United States.

Q Can I access the Web and send emails in other countries?

If the plan from your carrier does not allow these services, you can purchase them with a prepaid SIM card.



Which MP3 Player Is Best For You?

Pods are cool, sure, but you have other choices when it comes to listening to your tunes. This chart compares the most important—and coolest—features from select MP3 players.

		Memory type	Capacities	Songs	Video; FM tuner capabilities	Colors	Battery life
What It Means		Hard drive (moving parts, more capacity) or flash (no moving parts)	How much memory the player has (on models available at Best Buy)	Based on four-minute songs at 128Kbps, the number a player can hold	Some MP3 players can play video or let you listen to radio stations	Several players offer a variety of color choices	How long the battery will last when playing music
	Samsung S2 Pebble MSRP: \$29.99* SKU 8986118	Flash	1GB	250	Neither	Red, black, white, purple, green	13 hours
	Sony Walkman MSRP: \$59.99* SKU 9080148	Flash	2GB	475	No; Yes	Black, pink, red	14 hours
	Apple iPod shuffle MSRP: \$79* SKU 9229505	Flash	4GB	1,000 (AAC)	Neither	Black, silver	10 hours
	Samsung S3 MSRP: \$79.99* SKU 8985949	Flash	4GB	N/A	Both	Black, blue, green, red, white	25 hours
	SanDisk Sansa Fuze MSRP: \$79.99*; \$99.99*; \$129.99* SKU 8753789	Flash	2GB; 4GB; 8GB	500; 1,000; 2,000	Both	Black, blue, pink, red	24 hours
	Microsoft Zune MSRP: \$149.99* SKU 9008502	Flash	8GB	2,000	Both	Blue, green	24 hours
	Apple iPod touch MSRP: \$229*; \$299*; \$399* SKU 8772063	Flash	8GB; 16GB; 32GB	1,750; 3,500; 7,000 (AAC)	Yes; No	Black	36 hours
	Apple iPod classic MSRP: \$249* SKU 8772036	Hard drive	120GB	30,000 (AAC)	Yes; No	Black, silver	36 hours

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which GPS Device Is Right For You?

One of the hottest CE devices around right now is a GPS, and what a useful device it is, too. Here, we compare some models available on today's market. All of these units come with maps already loaded, and you can purchase additional maps, as well.

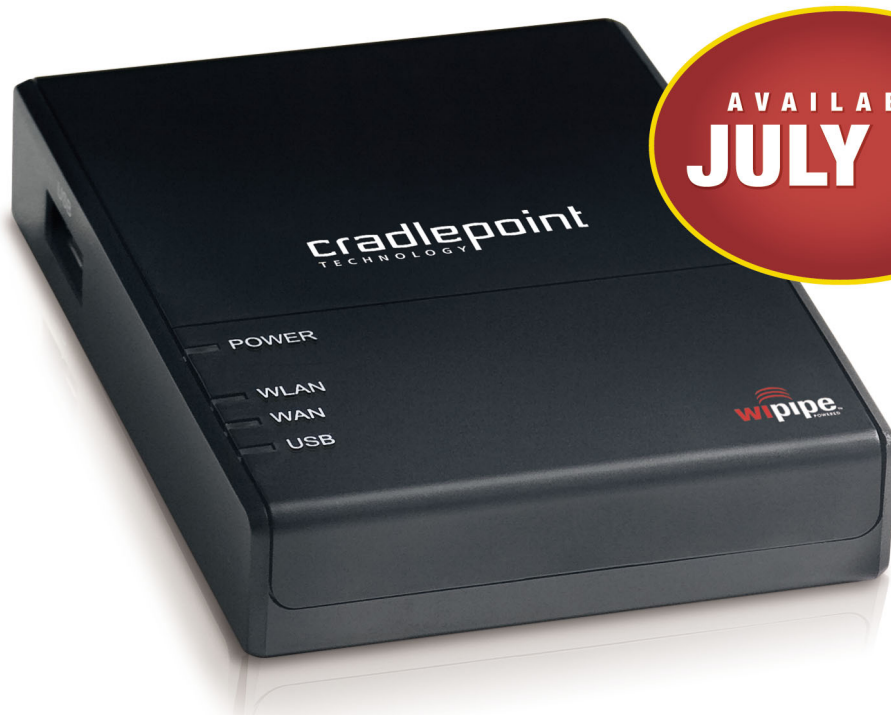
		Screen size; Dimensions	Text-to- speech; Traffic receiver	Preloaded maps	WAAS	Bluetooth; MP3 play- back	Included charging adapters
	What It Means	The diagonal measurement of the screen; height x width x depth	Unit calls out specific street names; unit receives traffic updates and re-routes accordingly	The regional maps that come included with the GPS unit	A satellite and ground station system that gives exceptional GPS accuracy	Some units communicate wirelessly with other Bluetooth devices or play MP3s	AC adapters plug into the wall; DC adapters plug into your car's cigarette lighter
	TomTom ONE 130 MSRP: \$149.99* SKU 8774463	3.5 inches; 3.8x3.2x1 inches	No; No	Entire U.S. (including Puerto Rico) and Canada	No	No; No	DC adapter
	Nextar 43LT MSRP: \$169.99* SKU 9301052	4.3 inches; 3.2x4.6x0.8 inches	Yes; Yes	Entire U.S.	No	No; Yes	DC adapter
	Navigon 2100 MSRP: \$199.99* SKU 8617302	3.5 inches; 3.1x4x0.7 inches	Yes; No	Continental U.S.	No	No; No	DC adapter
	LG LN740 MSRP: \$249.99* SKU 8440868	4 inches; 3.5x4.5x0.7 inches	Yes; Yes	Entire U.S. (including Puerto Rico) and Canada	No	No; Yes	AC adapter
	Magellan Maestro 5310 MSRP: \$249.99* SKU 8754403	5 inches; 3.6x5.6x0.8 inches	Yes; Yes	Entire U.S. (including Puerto Rico) and Canada	Yes	No; No	DC adapter; AC adapter
	Insignia NS-CNV10 MSRP: \$399* SKU 8947287	3.5 inches; 3.21x4x0.9 inches	Yes; Yes	Entire U.S. (including Puerto Rico)	Yes	No; Yes	DC adapter; AC adapter
	TomTom GO 740 LIVE MSRP: \$399.99* SKU 9263281	4.3 inches; 3.4x5x0.9 inches	Yes; Yes	Entire U.S. (including Puerto Rico) and Canada	No	Yes; No	N/A
	Garmin nüvi 765T MSRP: \$599.99* SKU 8956089	4.3 inches; 3x4.8x0.8 inches	Yes; Yes	Entire U.S. (including Puerto Rico) and Canada	No	Yes; Yes	DC adapter

*Prices listed in this issue are for general reference and may vary from retailer pricing.



Portable Wireless Router

Create Your Own Hotspot Anywhere



AVAILABLE
JULY 26

CradlePoint 3G Mobile Broadband Travel Router

MSRP: \$99.99

SKU: N/A

www.cradlepoint.com

Quick Overview

With the CTR350 3G Mobile Broadband Travel Router, CradlePoint has made it easy to take the Internet with you anywhere. Simply connect one of over 100 supported USB data modems*, and the CTR350 creates a secure Wi-Fi hotspot that can be shared with up to 16 people. Enjoy the simplicity and convenience of Wi-Fi without having to search for a hotspot again.

Perfect For

Anyone who uses a USB data modem and would like to share Wi-Fi with family, friends, and colleagues, including home users who can't get DSL or cable Internet.

Outstanding Benefits

- **Share Internet access with up to 16 Wi-Fi devices**, such as laptops, printers, cameras, game consoles, MP3 players, smartphones, etc.
- Be up and running in minutes. There's **no software to load**, and it offers plug-and-play simplicity.
- **Works anywhere you have mobile broadband coverage.**
- **Ethernet port allows connection to non-Wi-Fi devices**, such as VoIP phones, DVRs, printers, and game consoles.

Coollest Feature

CradlePoint's CTR350 is about the size of a deck of cards, but don't let that fool you. It is a full-featured router offering top-level security, content filtering, WiPipe™ Technology, a signal range of 150 feet, and capacity for 16 users.

*Not included. See your Best Buy sales representative for details on data modems and plans.

Accessories & Services

No matter where you go, a wireless device can add enjoyment to your journey. Cell phones help you keep in touch with loved ones when you're traveling for business, while a GPS device can help you find your way if you're lost or want to find the local hot spots during a vacation. And,

of course, your MP3 player can provide the soundtrack for wherever you're headed. To make sure you are taking full advantage of the capabilities your wireless devices offer, check your local CE retailer for accessories that can enhance your mobile experiences. We've listed our favorites below. **FC**

MP3 PLAYER CASES

- Protect your MP3 player from bumps and scratches
- Quickly access your player's functions with a clip
- Keep your player out of your way with an armband

MP3 PLAYER DOCKS & SPEAKERS

- Invest in portable speakers to play the music on your MP3 player for a group; some include radios and can also play CDs
- Recharge your player's battery with a portable dock as you continue listening to music
- Play your music through car speakers using an FM transmitter

MP3 PLAYER EARPHONES

- Match earphones to your needs: If you don't want anything bulky, opt for earbuds that fit inside your ear; to hear every musical detail, try headphones that cover the ear completely
- Listen to your music without the interference of background noise with earphones that offer a noise-canceling feature

CELL PHONE CHARGERS & BATTERIES

- Keep your phone charged no matter where you are; adapters for your cell phone let you use solar power, your car's DC outlet, wall power, or your computer to charge your phone
- Be prepared for emergencies with extra cell phone batteries

CELL PHONE HEADSETS

- Keep your hands free while still being able to use your phone
- Link compatible cell phones to a Bluetooth headset to make or take calls without a tangled mess of cable
- Don't miss any of your conversation by using a headset that offers noise-canceling capabilities

CELL PHONE CASES

- Safeguard your phone from wear and tear with a case
- Universal cases fit most sizes of cell phones; some of these will include clips and wrist straps for portability and accessibility
- Fitted cases specifically fit your phone's model type; these can be hard acrylic casings, rubber sleeves, or leather pouches
- Avoid scratches and fingerprints with stick-on or hard clear screen protectors on your phone's screen

GPS MOUNTS

- Put your GPS within hand's reach with a mount
- Mounts can be placed on a car dash or stuck to a windshield
- GPS mounts are also available for golf carts or bicycles

GPS CHARGERS

- Make sure your travel companion always has a full battery
- If you do run out of battery, charge your GPS with an adapter; these can plug into a wall, PC, or car's DC outlet

MOBILE SERVICES

Whether your wireless device is brand-new or nearing the end of its life span, your local CE retailer offers services to help you take care of all of your wireless device's needs.

- Protection plans for GPSes, MP3 players, and cell phones
- Phone and battery recycling
- GPS setup and deck installation
- MP3 vehicle integration
- MP3 player setup and training
- Cell phone repair services and loaner phones

Where The Past Meets The Present

Devices For Analog & Digital Use



Chances are you know someone who defiantly thumbs his nose at technology in the name of holding on to the good ole days.

You probably also know an old-schooler who still owns a vinyl LP collection and also routinely buys music in the format. What our nostalgia-loving friends might not know is that despite the fact that technology is always moving forward, it's possible to enter the digital world without completely leaving analog behind.

The Needle & The Damage Done

Not only is new music still released on vinyl, but the segment is thriving, relatively speaking. Need proof? Best Buy's healthy catalog of 5,250-plus LPs and 12-inch singles covering the blues, folk, jazz, and other genres is clear evidence of vinyl's current popularity. Further, even if you disposed of your turntable long ago, current USB-based turntables in the \$165 range will play vinyl records and also connect to a PC's USB port and use software to convert an LP's analog tracks to digital files that you can burn to CDs or load on a digital audio player.

For those still rocking to cassette tapes, you're covered, too. Beyond playing audio cassettes, a retro-style portable player with a modern LCD, digital

AM/FM stereo tuner with numerous presets, and multiband weather tuner is available in the \$40 range. Further, voice recorders priced from about \$35 to \$50 can record memos, notes, and other voice recordings to standard- and micro-sized blank cassettes.

If you have a penchant for components that seem as though they stepped straight out of the 1950s, an AM/FM radio encased in a walnut cabinet and sporting an oversized tuning knob while also offering a modern 3-inch driver and technology that simulates surround-sound audio is available for about \$100. Other modern touches include a built-in auxiliary jack that accepts CD players, DAPs, video players, and other modern digital devices to output audio over the radio device.

Turn Back The Clock

Whether you're an audiophile who covets vinyl's warm, rich audio textures or just want to welcome the present without completely abandoning the past, numerous products can help you revel in past glory while enjoying the conveniences of modern technology. **FG**

BY BLAINE FLAMIG



Why So Much Love For Vinyl?

Even if you've never experienced the tactile joy of dropping a needle to vinyl, you've likely heard audiophiles' arguments that vinyl records sound richer, fuller, and more natural than digital music—crackles, skips, and all. One reason cited for this superior sound is that vinyl records don't compress audio data as digital formats do in order to save storage space. Apparently, U.S. buyers are buying in, as vinyl LP sales climbed 89% from 2007 to 2008 (about 1.88 million LPs in 2008 vs. about 990,000 in 2007), according to Nielsen SoundScan. Still, LPs represented just 0.01% of the 1.5 billion-plus digital and analog music units sold in 2008. ●

Parental Control

Restrictions For Your Kids' Gaming



Game consoles let kids do much more than play video games. They can access the Internet, download media, and play CDs and DVDs. While this

makes for a great entertainment station for your family, it can make controlling the content your kids can access more difficult.

Many game console manufacturers try to make a parent's job easier by including parental controls that let you restrict content access to a variety of media sources. Most let you lock and unlock parental settings with a PIN or a password to ensure your kids aren't going to be able to get their hands on inappropriate content. If you have kids of various ages, some game consoles will let you create individual accounts (or game console user accounts), so they will be able to access content appropriate for them. But to prevent your kids from creating new accounts that don't apply to the family settings, certain consoles will prohibit the creation of new usernames and memberships without the parental control PIN.

Content Restrictions

ESRB ratings are designed to inform parents of a game's content so they can decide if the game is suitable for their children. Some consoles let you restrict ESRB ratings so only games with a particular rating can be downloaded from an online store or played. Parents sometimes have the option of blocking



certain movie ratings, such as PG-13 or R-rated content.

Many games can be accessed online through the console's Web browser without having to download them to the console, so some consoles let you decide whether your child can access Internet or live games. Depending on your console, you might be able to control the level of the Internet restriction; if your console provides access to an online store, you can adjust settings that will allow particular access, as well. Some consoles will block a user from

using the Web browser, while others will let you plug in keywords or URLs to block. And if you don't want Junior and his friends spending lots of money on games while you're not home, you can restrict access to the online store so you have the final say about purchases.

Time Restrictions

To prevent your youngsters from spending too much time in front of the TV and more time outside getting exercise, you can place daily or weekly game-play time limits on most game consoles. These settings will block children from playing games beyond the time limits you implement by prompting the user to enter a parental control PIN or password to play games for a longer amount of time. Also, depending on the console, parents can also look up how long their children have been playing video games.

Not Just For Kids

Because adults enjoy the benefits of having a game console just as much as kids do, you can turn off parental control settings any time you want. All you need is your PIN or password, and you can access movies or games that aren't age appropriate for your children. You also have the option of disabling the game console's parental settings and re-enabling them when you're done using your game console. Oftentimes a game console won't require that you re-enter parental settings after you've turned them back on. **FG**

BY TESSA WARNER BRENNEMAN

ESRB Game Ratings & Descriptions

Find Material That's Appropriate For Your Kids

ESRB (Entertainment Software Rating Board) Ratings

In order for parents to select gaming software appropriate for their children, ESRB (www.esrb.org) ratings are listed on the front and back of most game packages to provide concise and impartial details about a title's content.



Early Childhood. Titles with this rating have content that may be suitable for children ages three and older. These software titles contain no material that parents would find inappropriate.



Everyone. Titles with this rating have content that may be suitable for children ages six and older. Games in this category may contain minimal cartoon, fantasy, or mild violence and infrequent use of mild language.



Everyone 10+. Titles with this rating have content that may be suitable for children ages 10 and older. Games in this category may contain more cartoon, fantasy, or mild violence and language, as well as minimal suggestive themes.



Teen. Titles with this rating have content that may be suitable for children ages 13 and older. Titles in this category may contain violence, suggestive themes, crude humor, minimal blood, simulated gambling, or infrequent use of strong language.

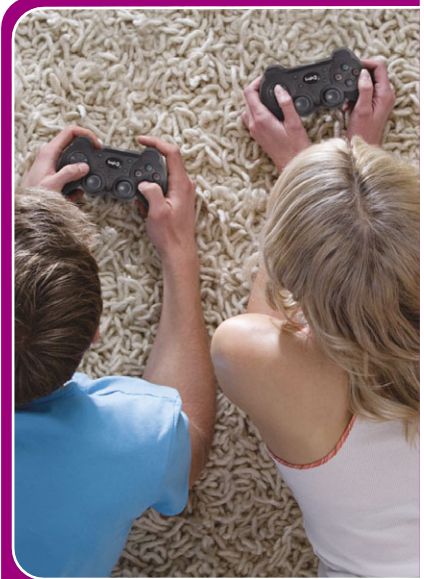


Mature. Titles with this rating have content that may be suitable for persons ages 17 and older. Games in this category may contain intense violence, blood and gore, sexual content, or strong language.



Adults Only. Titles with this rating have content that is only suitable for persons 18 years and older. Games in this category may include prolonged scenes of intense violence, graphic sexual content, or nudity.

For additional information, ESRB ratings on the back of game packages include content descriptions and depictions.



Gaming Tips For Parents

Aside from checking a game's ESRB ratings, there are other ways you can ensure the games your youngsters are playing are age appropriate.

- Carefully look at everything on a title's packaging, including the game graphics.
- Find game reviews, screen shots, or demos to get a better idea of a game's content.
- If available, use the game's parental controls to restrict inappropriate content.
- Learn about games by talking to other parents and older children who are familiar with or have played certain titles.
- Participate in your children's gaming and discuss their games as much as possible.
- Be aware of nonrated ESRB material a game may contain. "Mods" are program downloads that can alter a game's content, and online games often have live player chats, as well as other user-generated content.

Which Gaming System Is Best For You?

Game consoles and portable devices are no longer limited to gameplay. They can also access the Internet, download media, and play your favorite DVDs or CDs. To help you find a gaming device that will suit you well, here's a comparison of the most popular selections you can find at your local CE retailer.

		Hard drive size	Compatible memory cards	Optical drive	Video resolution output	Ports	
What It Means		How much data the system can hold	Cards that will let you save and off-load data, such as game saves or personal media	Aside from game discs, other playable media formats	Highest number of video pixels that are sent to a TV or portable console screen	Hookups for controllers, as well as video and audio output	
Console Devices		Sony PlayStation 3 (80GB) MSRP: \$399.99* SKU 8982988	80GB 2.5-inch Serial ATA	SD, MMC, CF Type I/II, Microdrive, and Memory Stick PRO/PRO Duo	CD-RW/ DVD±RW/ BD	1,920 x 1,080	1 Ethernet, 1 A/V, 1 Optical digital audio, 2 USB, 1 HDMI
		Sony PlayStation 2 MSRP: \$129.99* SKU 7266638	N/A; uses two memory card slots to save game data	PlayStation Memory Card (8MB)	CD-RW/ DVD±RW	1,280 x 1,024	2 controller, 2 USB, 1 Ethernet, 1 A/V Multi-out, 1 Optical Digital out, 1 FireWire
		Nintendo Wii MSRP: \$249.99* SKU 8008559	512MB	SD/Nintendo GameCube Memory Card	Can only play game titles	720 x 480	4 controller, 1 Component, 1 Composite, 1 S-Video, 2 USB
		Microsoft Xbox 360 Elite MSRP: \$399.99* SKU 8301492	120GB	Xbox 360 Memory Unit	CD-RW/ DVD±RW	1,920 x 1,080	1 A/V cable, 3 USB, 1 Ethernet, 1 HDMI, 4 controller
Portable Devices		Nintendo DSi MSRP: \$169.99* SKU 9249725 (blue)	256MB	SD	None	Dual 256 x 192	1 headphone, 1 microphone
		Nintendo DS Lite MSRP: \$129.99* SKU 8566312	None	None	None	Dual 256 x 192	1 headphone, 1 microphone
		Sony PlayStation Portable 3000 MSRP: \$169.99* SKU 9175082	None	Memory Stick Duo	UMD (Universal Media Disc)	480 x 272	1 video out/ headset connector, 1 USB, 1 DC out

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Media streaming	Online community	Wi-Fi compatibility	Parental controls	Compatible game formats	Available accessories	Controllers	Perfect for
Send media wirelessly from the console to other devices and vice versa	Web site membership for downloads, upgrades, and more	Console can access the Internet without a cable hookup	Helps parents decide what content their kids can or cannot access	Game titles that can be played on the game system	Extras that can help enhance your gaming enjoyment	Included controllers; wired/wireless controller compatibility	Who can benefit from the special features the gaming system offers
Yes	Yes, free PlayStation Network membership	Yes, 802.11b/g	Options available for PS3 games on PS Network, DVDs, BDs, and Internet	Sony PlayStation 3 titles and select PlayStation 2 titles	Blu-ray Disc remote, Bluetooth headsets	Includes 1 DualShock 3 wireless controller; Both	Anyone on a budget who wants the full Internet gaming experience with an integrated DVD player
No	Yes, free PlayStation Network membership	No, only a wired Internet connection is available	Options available for DVDs	Sony PlayStation and PlayStation 2 titles	Cordless controllers, memory cards, Rock Band and Guitar Hero controllers	Includes 1 DualShock 2 analog controller; Both	Anyone on a budget who wants the full Internet gaming experience with an integrated DVD player
Yes	Yes, various paid and free Wii Channels are available	Yes, 802.11b/g	Options available for Wii titles, online interaction, downloads, user-created content, and more	Nintendo GameCube and Wii titles	Nunchuck, wireless Wiimote, wheel, and classic (wired) controllers; wireless sensor bar	Includes 1 wireless Wiimote and nunchuck; Both (some titles require a wired Wiimote)	Gamers of any age who want a unique wireless gaming experience that requires little gaming knowledge
Yes	Yes, free Xbox Live Silver membership with one month free Xbox Live Gold	No, only a wired Internet connection is available	Options available for Xbox titles, DVDs, and Xbox LIVE interaction	Microsoft Xbox and Xbox 360 titles	Wireless headset, hard drive, wired and wireless controllers	Includes 1 wireless controller; Both	Those who want to play games in true HD with full theatrical sound and plenty of hard drive space
Yes	DSiWare (DSi online store)	Yes, 802.11	Available for Nintendo DSi content	Nintendo DSi and Nintendo DS titles	Audio headset, battery power pack, screen protectors, carrying cases, styli	N/A	Users who want a handheld gaming system that lets them take, personalize, and share photos, too
No	Yes, free Nintendo Wi-Fi connection	Yes, 802.11b	No	Nintendo DS and Game Boy Advance titles	Cases, AC adapter, headphones with microphone, styli, cartridge case	N/A	Anyone who will appreciate the uniqueness of dual touchscreens and voice-control gaming
No	Yes, free PlayStation Network membership	Yes, 802.11b	Options available for UMDs, Internet, and video downloads	PlayStation Portable titles	Battery charger, travel case, media manager software, A/V cable, AC adapter	N/A	Media buffs who want to enjoy movies, photos, and music when they're on the go



Accessories & Services

The gaming experience goes beyond the game itself—you need the right console peripherals and the best just-in-case services. We've compiled a list

of some of the must-have accessories that will only enhance your gameplay, so be sure to remember these items for your next trip to your local CE retailer. **EG**

HEADSETS

- Use a hands-free headset to enhance your gaming experience by planning strategies aloud with your team
- A Bluetooth 2.0 headset is designed to communicate with your gaming console; Bluetooth headsets will be compatible with most game consoles
- Consider noise-canceling headsets with echo-minimizing microphones so you can hear and be heard clearly

WIRELESS PLAY-AND-CHARGE KIT

- Enjoy continuous gameplay as your controller recharges wirelessly, without the hassle of cords
- Look for a play-and-charge kit that includes a power-gauge dashboard so you can keep track of your controller's battery status

USB DEVICES

- A USB media hub featuring a memory card reader will let you connect other USB devices (MP3 players, portable gaming devices, etc.) to your game console
- Use a USB rechargeable battery pack to charge the Li-Ion battery for guitar controllers

WIRELESS CONTROLLER

- Bluetooth technology lets you play with the freedom to move around
- Some controllers use traditional AAA batteries to sustain your playing time
- Find the best design for your grip: ergonomic or traditional

GAMING KEYBOARD

- Adding a keyboard can help game efficiency—type in text codes and chat with other players quickly
- Look for a model with a touchpad so you can easily scroll around the game display

MUSIC CONTROLLER ACCESSORIES

- Add a heavy-duty bass pedal to your gaming drum set to replace your standard pedal
- A tripod microphone stand will make your song-based games more true-to-life
- Extra cymbals for your rock drum kit will give you more freedom to express musical ability

EXTERNAL MEMORY

- External hard drives, USB drives, or memory cards back up your in-progress games
- When additional memory is connected to live (online) games, you can save gaming content and downloads
- The more memory you have, the more games and downloads you'll be able to store

RACING WHEELS

- A gaming steering wheel puts the virtual racing experience directly in your hands
- A comfortable, accurate wheel should give you more control with turns, braking, and acceleration
- Be sure to purchase a racing wheel that's compatible with your particular gaming console

GAMING SERVICES

Your local CE retailer provides some helpful services, both in-home and in-store, to enhance your gaming console. Specifically, the professionals can set up online connections, install system updates, and transfer data to a gaming storage device.

- Online account configuration
- Console system updates
- Stream media from a PC to a gaming console
- Connect a console to a home-theater center

BLUETOOTH CAR KITS



Juggling is only fun at the circus or at a child's birthday party—not in the car. Yet, between on-the-go meals and tending to kids in the backseat, many of us find ourselves with one too few hands when driving. When the cell phone rings, you want to answer it but know that it's just one thing too many.

Plenty of us already utilize Bluetooth headsets to free up our hands when we're working around the home or office, getting phone instructions on how to fix the car (while underneath it) from your mechanic cousin, or wrangling your two golden

retrievers while talking to your brother on the phone.

But Bluetooth car kits take the idea of hands-free freedom to a new level.

How It Works

One defining feature of Bluetooth car kits is that they use the car's stereo system as a speaker instead of a small headset. The kit will also include a microphone, so you can just speak calling commands (in some cases) or have conversations without holding your phone up to your ear and mouth; it's similar to a speakerphone in this way, but it's integrated with your car.

Otherwise, the technology is identical to any other Bluetooth device: When you bring your mobile phone within range of the car kit, the devices make a wireless connection via Bluetooth and presto—hands-free bliss.

Bluetooth car kits come in a variety of shapes and sizes; some clip onto the car's sun visor, some are mounted on the dashboard or windshield, and others can be professionally installed into the dashboard like a stereo. Therefore, some kits are easily removable if you want to transfer it to a different vehicle and some are permanently installed. Many car kits are small and inconspicuous, taking up

LG's Solar Bluetooth Car Kit

While you're shopping for the ideal Bluetooth car kit, why not go solar? The LG Solar Bluetooth Car Kit (\$99; www.lge.com) will deliver up to one hour of talk time for every two hours charged in sunlight, which decreases the need for charging the device in traditional ways. The result is a convenient and green solution to powering your car kit; that way you can keep chatting with your family and friends during long stretches of highway.

The LG kit includes a window mount and works with most Bluetooth-enabled cell phones. It's hands-free and stable, so you can make a call, start talking without fiddling with any devices, and keep your eyes on the road. Plus, with easy pairing and auto reconnect, you can connect up to two phones during setup.

In addition to solar power, key features of the LG Solar Bluetooth Car Kit include echo cancelation and noise reduction, ensuring that your conversations are clear and unencumbered by technological gaffs.

LG HFB-500 Solar
Bluetooth Car Kit
\$99
www.lge.com



Call management functions include those you would expect from any telecommunications device: redial, voice dialing, call reject, and call waiting. Thus, using the LG Solar Bluetooth Car Kit means that you won't be sacrificing the call functions you're accustomed to. ●

essentially no space in the car while others have LCD screens with call info and are designed to be clearly visible to the driver at all times.

Lower-priced models often use batteries to power themselves. Others rely on solar power or derive their juice from the car itself via an adapter.

All you need to do to get your Bluetooth-compatible mobile phone working with a Bluetooth car kit is an established wireless connection. To do this, turn on the car kit, activate the Bluetooth function on your mobile phone, enter the security code, and look to make sure they've connected.

Note that some kits will only operate with a certain type or brand of cell phone, so be sure you find a Bluetooth kit that will work with your mobile phone.

Safety First, Convenience A Close Second

Even the most dexterous among us must admit that holding a cell phone while driving is somewhat distracting. No longer is this the case with a Bluetooth car kit. Not only is it hands-free, but it's, er, ear-free. That is, you don't need a headset—the car kit itself and the car stereo will take care of the audio situation. All you need to do is talk and listen.

If you need to use your cell phone in the car, there's no safer way than with a car kit. Your phone's calling functions can be switched to voice control with many Bluetooth car kits (if your phone supports it), so you won't ever have to take your eyes off the road nor your hands off the wheel. Features of this type include voice dialing and redial capabilities.

Another motivating factor for investing in a Bluetooth car kit is the fact that several states have handset bans, requiring drivers to employ a hands-free device while chatting on the phone, and more states are considering similar legislation. **FG**

Celebrate Your Independence

Your freedom shouldn't be taken for granted. This summer, why not take a CE device along with you to enjoy the world without being tethered by wires? Stop by your local CE retailer to gain the wireless advantage with products such as the ones you see here.

Samsung Netbook With Intel Atom Processor N270

Get the latest movie times and email your friends an invite.
\$479.99



Insignia Bluetooth Wireless Behind-The-Head Headphones

Never get hung up on gym equipment again.
\$54.99



LeapFrog Didi Custom Gaming System

Entertain the kids while you wait in the doctor's office.
\$79.99



Slacker C2 8GB Portable Personal Radio

Have music ready to go for any occasion, regardless of where you are.
\$249.99



Flip Video Ultra Series Camcorder

Document life's special moments with a pocket-friendly camcorder.
\$149.99



Garmin Forerunner 405 GPS Watch

Become friends with a fitness companion that's guaranteed to accompany your pace.
\$349.99



Monster Cable PowerNet 200

Strategically place an extra Internet connection in any of your home's wall outlets.
\$149.95



Why Choose SanDisk?

TRUST THE WORLD LEADER IN FLASH MEMORY



Choose SanDisk, the minds behind flash memory

As the pioneers of flash memory, SanDisk is known all over the planet. Wherever people take pictures, listen to music, use cell phones—or do much of anything at all with digital devices—they're probably using a SanDisk memory card.

Give customers the memory cards they can count on.

- SanDisk developed or co-developed most of the major card formats for photography, video, gaming and mobile phones
- No one invests more in research and development than we do
- We never outsource—everything in the card is designed and built by us
- After 20 years in the business, SanDisk is still making some of the most trusted memory products anywhere



Ideal for
DSLR cameras



Ideal for
digital cameras



Ideal for
Sony devices



Ideal for
mobile phones



Ideal for
laptops & PCs

1 megabyte (MB) = 1 million bytes. Approximations based on CompactFlash Card. Actual numbers of image will vary by camera, RAW image file size, and card format *1 gigabyte (GB) = 1 billion bytes. Some capacity not available for data storage.

SanDisk®